EMPLOYEES' PERCEPTIONS OF SUSTAINABILITY PROGRAMS:

A MULTIPLE U.S. CONVENTION CENTER CASE STUDY

by

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STATEMENT OF DISSERTATION APPROVAL

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ABSTRACT

Sustainability programs are growing in importance to convention centers; however, development and the implementation of these programs is challenging. Some argue that employees are the linchpin to successful sustainability programs. This dissertation sought to understand employee perceptions of the development, implementation, and challenges of convention center sustainability programs. This dissertation also inquired about the role of the employee in the planning and implementation of convention center sustainability programs. Complex Adaptive Systems (CAS) theory was used as a conceptual framework for this investigation.

This qualitative multiple instrumental case study assessed trends across three Tier I and II U.S. convention centers (containing at least 350,000 square feet of exhibit space) participating in sustainable certification programs. Results suggest many factors contribute to the successful development and implementation of sustainable certification programs in convention centers. Even though convention center sustainability certification programs focused on environmental sustainability, the actions of the convention centers also demonstrated engagement in economic, social, and institutional sustainability practices. Results demonstrated how employees viewed and engaged in convention center sustainability programs. Findings support three characteristics recommended to further develop sustainability in the hospitality industry (1) Stakeholder buy-in; (2) A simple, consistent, relatable definition of sustainability, (3) Positive

perceptions and value creations of sustainability for businesses and consumers. Successful development and implementation of convention center sustainability programs should take a systems-focused approach. This research can help them do so; it uses CAS theory to understand convention center sustainability programs and makes specific recommendations on how convention center systems can work together towards enhanced program implementation. Second, there is a need for the convention center industry to broaden their sustainability definitions to include the environmental, social, economic, and institutional aspects of sustainability systems. The dissertation also uncovered unique challenges to convention center sustainability programs including, center size, unions, contract workers, vendors, operations, program costs, understandings of key stakeholders, and definitions of sustainability impact convention center sustainability programs.

This dissertation is dedicated to the underdogs. For anyone who has doubted their worth, greatness or abilities. If I was able to finish this research, you can accomplish anything!

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CHAPTER 1

INTRODUCTION

Tourism and Conventions

Since the 1950s, tourism has undergone significant growth (World Tourism Organization (UNWTO), 2016). In 2014, there were approximately 1,133 million international travelers and in 2015 an estimated 5 to 6 billion domestic travelers (UNWTO, 2016). The number of annual international travelers is predicted to grow to 1.8 billion by 2030 (UNWTO, 2014). It was estimated that tourism has contributed $7,170 trillion to the world economy, accounted for 6% of the world's export services, and provides one in 11 jobs (UNWTO, 2016; World Travel & Tourism Council, 2016, March). The United States (U.S.) tourism industry is the largest in the world having contributed $1,469.9 billion to the global economy in 2015, and is expected to increase by 2.8% for 2016 (World Travel & Tourism Council, 2016). In 2015, U.S. domestic and international business travelers' spending was $296.3 billion, in great part because of growth in meetings, incentive travel, conventions, and exhibitions (MICE), which accounted for 121.9 billion of business travel spending (U.S. Travel Association, 2016a). The MICE industry is dependent on venues such as convention centers to maintain continued growth and thrive; the success of event venues parallels the growth in the MICE industry. Convention center tourism (traveling for the purpose of visiting a

convention center) is one of the fastest growing facets of the tourism industry (Yoo & Weber, 2005). Convention centers date back to the beginning of the industrial revolution, yet there is surprisingly little research on this sector of tourism (Fenich, 1998; Kim et al., 2004; Montgomery & Strick, 1995; Weber & Chon, 2002). There were an estimated 1,119 convention centers worldwide, 426 located in the United States (Cvent Supplier Network, 2000-2015). In 2011, there were 31,000 exhibitions (not including meetings and conventions) contributing to the use of 1,334,724,891 square feet of total net exhibit space, 4.4 million companies exhibited, and 260 million visitors globally (Union of International Fairs (UFI), 2014). In 2012, the United States (U.S.) had 1,833,200 meetings, conferences, conventions, trade shows, exhibitions, incentive events, and corporate/business meetings with approximately 224,947,000 participants (PricewaterhouseCoopers, 2014). As the industry continues to grow, the impacts of convention centers become more significant.

Convention centers have the potential for both positive and negative environmental, economic, social/cultural, and institutional (or policy, ethics, and governance) impacts. The larger a convention center, the larger the events hosted, the more energy, water, and consumed products, waste created, and employees paid. The more attendees visiting the center/destination, the more money they make for and bring to the community. Therefore, this research focused on the larger convention centers, which theoretically had the greatest impact.

Sustainability

Between the 1960s and 1970s, people started to become more aware of consumption, resource use, and pollution from economic growth; this led to the development of the environmental movement, and increased regulations to prevent further destruction to the natural environment (Swarbrooke, 1999). During that time, a cautionary platform began to arise in the tourism industry, which stated that unregulated tourism development had detrimental social, economic, and environmental consequences, potentially devastating local residents, as they had the most to lose (Weaver, 2006). As the environmental movement grew, the tourism industry began to recognize the necessity for change. The "…over-utilization of the natural resources, especially during the peak periods of tourist activity as well as often ill planned tourism development, have provided a number of examples where tourism is in conflict with the natural environment (Mathieson & Wall, 1982, p. 101)" (Buhalis & Fletcher, 1995, p. 4). As the movement continued to grow, the term "sustainable development" became a key term used after the United National World Commission came together in 1987 and wrote the publication *Our Common Future*, otherwise known as the *Brundtland Report* (Makower, 2009). The report defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 41). However, the Brundtland Report made little reference to tourism outside of acknowledging it as a "megasector" leaving organizations and academics to integrate sustainability into the tourism industry (Weaver, 2006). In the early 1990s, the term sustainable tourism began to materialize in the tourism literature and in 1993 the peer reviewed, *Journal of*

Sustainable Tourism was created to meet the ever-growing needs of the newly founded sustainable tourism industry (Weaver, 2006). Since that time, the tourism industry has worked to integrate sustainability planning into both academic and industry literature, organizational planning, conferences, education, and the creation of organizations that support the cause. More recently, in 2015, the General Assembly of the United Nations announced the 2030 Agenda for Sustainable Development. The agenda considered tourism as a primary way of eradicating poverty, working towards equality, justice, and addressing climate change. At the same time, the UN created 17 Sustainable Development Goals (SDGs) that incorporated tourism as a primary focus (UNWTO, n.d.). The UNWTO has been working to integrate the SDGs into their partnerships, encouraging the tourism industry to work towards the goals as well (UNWTO, n.d.).

One way of operationalizing sustainability is through the concept of applying a triple bottom line (3BL), or the inclusion of environmental, social, and economic aspects of sustainability (Norman & MacDonald, 2003; Springett, 2003). Tourism businesses, governments, nongovernmental organizations (NGOs), activist groups and academia have adopted the 3BL. Organizational planning through marketing, publications, education, and recognition from small to large corporations have brought the 3BL to the forefront as a key term (Norman & MacDonald, 2003). Some argue that the 3BL is a fraught concept because it is missing a fourth bottom line (Bendell & Kearins, 2005; Teriman, Yigitcanlar, & Mayere, 2009; Wight, 2007). However, the quadruple bottom line (4BL) concept has struggled to gain footing due to a lack of consensus on the fourth bottom line. The above authors alternately claimed the fourth component to be some version of institutional factors, governance, or ethics. However, despite the indecision as to the

fourth bottom line, what the literature had not discussed was that the three were in fact similar concepts at different scales. The word institutional could refer to a large scale, encompassing anything from management of the world, leadership of countries or management of organizations (Cottrell, Vaske, & Roemer, 2013). Governance were the ways in which an institution or organization governed or managed people (Teriman et al., 2009; Wight, 2007). The concept of ethics relates to varying scales, but ultimately boiled down to individual choices (Wight, 2007). As such, this work defined the fourth bottom-line as institutional, an umbrella term covering all three concepts. By acknowledging the institutional aspects of sustainability, the tourism industry could better study, understand, and measure ways in which institutional sustainability impact the industry. Thus, for the purpose of this study, the definition of sustainability is inclusive of environmental, social, economic, and institutional sustainability.

Benefits of Sustainability Practices

There are many benefits to sustainability planning, policy, and practice. Benefits of sustainability planning include improved client or guest respect, relations and satisfaction (Camus, Hikkerova, & Sahut, 2012; Miller & Twining-Ward, 2005; Ventriglia & Rios-Morales, 2013). The development of sustainability programs can enhance an organizational image, provide competitive advantages, new market revenue, press and marketing opportunities (Camus, Hikkerova, & Sahut, 2012; Miller & Twining-Ward, 2005; Simons & Unterlofler, 2015; Ventriglia & Rios-Morales, 2013). Sustainability planning can also improve operations, providing technological developments, decreased consumption or energy and water, cost savings/ profits, tax

relief, decreased refuse in the waste steam (Bricker, Black, & Cottrell, 2013; Simons & Unterlofler, 2015; Ventriglia & Rios-Morales, 2013). Sustainability programs can provide education, improved productivity, individual, and group empowerment, engagement, capacity building, health care, autonomy, decision-making, and shared values (Bricker, Black, & Cottrell, 2013). Sustainability policies and programs can reduce CO^2 emissions, offer alternative forms of waste management, and creative building and garden designs (Bricker, Black, & Cottrell, 2013). Sustainability programming can also help to develop partnerships, and create volunteer opportunities (Bricker, Black, & Cottrell, 2013). However, while there are many benefits to sustainability programs, there are also challenges to development and implementation of such programs.

Challenges to Sustainability Practices

There are a number of challenges and constraints to sustainability practices. One of the primarily challenges to sustainability programs is the term sustainability itself. There are many definitions of the term sustainability and organizations many times struggle to plan for and communicate their sustainability strategies because of the varying definitions and understandings of responsible business practices (Makower, 2009). Another challenge is finding ways to ensure employee support through positive perceptions and buy-in. For a tourism company to implement sustainability policy, employees must be onboard, which is often not the case (Collier & Esteban, 2007). Lastly, some tourism organizations may view sustainability as an ethical dilemma, ranging from a denial that there is a need for sustainable practices to belief that it is the

most important issue of our time, about which everyone should care deeply (Swarbrooke, 1999). The challenge of ethicality in sustainability decision making can be challenging for organizations, as they many times need to balance their overall needs with sustainability planning (Swarbrooke, 1999).

Background of the Problem

Convention Centers and Sustainability

Many convention centers are working to implement sustainable practices for a variety of reasons including cost savings, stakeholder engagement, ethical reasons, and publicity (Unterkofler & Simons, 2014). In addition, attendees, event planners, and suppliers are all increasingly expressing interest in sustainable practices, and convention center managers are working hard to accommodate them (Draper, Dawson, & Casey, 2011; Park & Boo, 2010). However, sustainability in convention centers is still a comparatively new phenomenon and research is sparse (Convention Industry Council, 2004; Deale, 2013; Presbury & Edwards, 2005; Rogers, 2013). Research on sustainability in convention centers has primarily focused on the environmental and economic aspects of sustainability, ignoring or putting less of an emphasis on the social and institutional aspects (Draper, Dawson, Casey, 2011; Park & Boo, 2010; Sox et al., 2013; Tinnish & Mehta Mangal, 2012). These studies have led to questions regarding the impacts that employee perceptions have on the evolution and implementation of sustainable practices in convention centers.

Recent studies, industry journals, websites, and conferences focused on convention centers have discussed the industry's commitment to implementing

sustainable practices. One exposition of this commitment is demonstrated through sustainability certifications and indicators (GMIC, n.d.; Pfalzgraf, 2015; Sox et al., 2013). Certification and relevant indicators provide guidance to convention centers operations and other components of the system. There are many benefits to becoming a certified sustainable center, including time and cost savings, data collections and public acknowledgement of efforts being made, efficiency of systems and processes, development of expertise, and acquisition of significant results (Convention Industry Council, 2010; Simon & Unterkofler, 2015). However, there is some confusion in the industry as to which certifications to use, which levels of certification to achieve, and how to get recognition for sustainability efforts made (Strick & Fenich, 2013). One way of looking at sustainability, sustainability certification, and associated indicators is through Complex Adaptive Systems (CAS) theory or by assessing the components of sustainability as interconnected facets, dependent on one another for functionality.

Complex Adaptive Systems

Systems theory suggests that everything is a part of a system; a group of components: individuals, atoms, organizations, anything from the smallest particles to the entire universe are a system and uniquely organize themselves over time with a purpose (Meadows, 2008). A complex system recognizes the unpredictability and interconnectedness of effects amongst time, interactions, stakeholders, equipment, and communities (i.e., a number of components structured in a multihierarchy where each component could be a system unto itself) (Lazanski & Kljajić, 2006; Urry, 2005). Individuals undertaking complex systems research have evaluated the composition of a

system, and how systems adjust and develop through time (Urry, 2005). Complex Adaptive Systems (CAS) theory refers to systems that are ever changing and adapting to new circumstances, always shifting in new ways to react to the same or different catalysts (Miller & Twining-Ward, 2005). This work treated a convention center as a CAS containing smaller systems at different scales, including different departments, and hierarchal levels of management. These subsystems were constantly modifying their actions to react to changes that occurred through policies, laws, employees, trends, the community, etc. Within the complex adaptive system of convention centers, a smaller scale unit is the individual employees whose perceptions at any given time may affect the overall running of the center. These perceptions are then both ever changing and systems unto themselves. There is a gap in the literature pertaining to convention centers being assessed as CAS and the ways in which the CAS within the centers are impacting the development and implementation of sustainability programs.

Statement of the Problem

The implications of convention center sustainability are widespread, with ramifications critically linked to the well-being of communities, associated events, and the natural environment (Simons & Unterkofler, 2015). Therefore, it is imperative for convention centers to become more sustainable. However, research has shown that centers often struggle to implement sustainable practices, in large part because they try to achieve sustainability in a piecemeal fashion without a clear set of best practices guided by industry and research (Sox et al., 2013). Some managers lack an understanding of what constitutes sustainability due to a confusion of terms (Sox et al., 2013). Others have

perceived sustainable practices to be expensive (e.g., installing solar panels, engagement in certification programs), and challenging (e.g., staff engagement, operations) (Unterkofler & Simons, 2014). Though managers in convention centers are working to implement sustainable practices (i.e., through certification programs), many have indicated employees may have the greatest impact on the level which implementation actually occurs (Female Convention Center Sustainability Manager, October 21, 2014; Male Convention Center General Manager & Female Marketing Director, September 15, 2015; Simons & Unterlofler, 2015).

Research has supported this idea, demonstrating employees are a vital asset for policy implementation in business endeavors overall (Lingard, Graham, & Smithers, 2000; Weber & Weber, 2001). Within the complex system of a convention center, there are many roles and responsibilities of employees, with a variety of different departments and hierarchical levels of management. Therefore, employees have potentially different relationships and perspectives when it comes to the implementation of sustainable practices (Cherian & Jacob, 2012; Kim & Choi, 2013; Park & Levy, 2014). While some research has stated the importance of employees in event and convention center sustainability implementation, research on employee roles in the development, implementation and challenges of convention center sustainability programs does not exist (Draper, Dawson, & Casey, 2011; Sox et al., 2013; Turtle, 2008; Simons & Unterkofler, 2015). Hence, this research is the first to assess convention center sustainability programs through employee perceptions and CAS theory as a conceptual framework. This also is the first to look at the process of starting a successful convention center sustainability program and how to maintain that program in the longterm.

Purpose of the Study

The purpose of this research was twofold: to understand employees' perceptions of the development, implementation, and challenges of convention center sustainability programs; and, explore the impact of employees on the development, and implementation of sustainability programs within U.S. certified sustainable convention centers.

Case Study Unit of Analysis and Variables

To address the purposes of the study, I used a case study research design. In case study research, the unit of analysis is the case/s or the bounded system/s (Merriam, 2009). The unit of analysis were three individual convention centers. To qualify convention centers for this study, the variables listed in Table 1.1 were utilized for selection. Specifically, I used these criteria to help find comparable cases. The cases focused on U.S. public convention centers because the U.S. convention industry has large positive and negative impacts: laws, city ordinances, and governmental policies. Privately owned convention centers have different structures than publicly owned facilities, and are many times included as part of a larger facility containing a hotel and casino onsite. I did not want to use convention centers that had hotels and casinos included as part of the facility because it would have changed the budget and the management of the site. I assessed the top 40 largest convention centers because I deemed them to make the greatest impacts through their size, economic impacts, number of events hosted, budgets, a larger work staff, resources consumed, and waste created. The centers were located in mid-sized sprawling American cities; this was because dense city environments were seen to have different characteristics from sprawling urban environments. All of the centers had to

Table 1.1 Variables of the Study

Case Selection	Variation of Case Selection	What Was Assessed
United States	Type of city (condensed, sprawling)	Type of certification used
Top 40 largest convention centers (Tier I and II)	Range of sizes of convention centers	Sustainability plan
Mid-sized American cities with convention centers	Regional selection	Stakeholders (event planners, exhibitors, participants)
Publicly owned	Organizational management company	Education/ Dissemination of policies
Standalone centers (not located inside of a hotel or casino)	Age of center	Employees
All have sustainability certifications	Length of time implemented sustainability practices	Knowledge of social, economic, environmental and institutional sustainability
Number of annual events offered	Length of time an employee has worked at a center (minimum 1 year)	Management
Full-time employees	Hierarchical management levels	Green Team/ Sustainability Manager
	Departments	Literature developed by convention center expressing sustainability practices
	Number of events offered per year	Marketing of sustainability within convention center

have at least one sustainability certification; this was important as it proved the centers' commitment to their sustainability programs. The centers were all placed within different regions of the United States; two of the three centers were managed by the same convention management company, the third was managed by a county. The centers varied in age, and length of time the sustainability programs had been implemented. The column to the far right explains the variables assessed through the research. I made efforts to collect as much information regarding the centers as possible prior to the study as to better select cases based on comparable qualities.

Research Questions

The purpose of this research was twofold: to understand employees' perceptions of the development, implementation, and challenges of convention center sustainability programs; and, explore the impact of employees on the development, and implementation of sustainability programs within U.S. certified sustainable convention centers. Specifically, I was interested in answering the following research questions:

(1) How were convention center sustainability programs developed, as perceived by employees?

(2) How are convention center sustainability programs implemented, as perceived by employees?

(3) What are the challenges to the development and implementation of convention center sustainability programs, as perceived by employees?

(4) What is the role of employees in the development of convention center sustainability programs?

(5) What is the role of employees in the implementation of convention center sustainability programs?

Significance of the Study

Although previous research has studied sustainability in convention centers (Draper, Dawson, & Casey, 2011; Park & Boo, 2010; Unterkofler & Simons, 2014), this is the first study to explore employee perceptions of sustainability programs. Past business, organizational behavior, and human resource literature has emphasized the importance of employees to the success of sustainability policy implementation (Brammer, Millington, & Rayton, 2007; Cherian & Jacob, 2012; Collier & Esteban, 2007; Rupp, Ganapathi, Aguilera, & Williams, 2006). This study contributes to the understanding of employee roles in the development, implementation, and challenges of convention center sustainability programs.

Much of the sustainable tourism literature has discussed the use of CAS theory as a way of better understanding organizations and destinations (Miller & Twining-Ward, 2005). However, convention center literature has not used CAS theory to enhance understandings of organizational functionality. This is the first study in convention center literature to use CAS theory as a conceptual framework.

Previous tourism research has assessed destination lifecycles (Swarbrooke, 1999; Walker & Walker, 2010). This research sought to understand how convention center sustainability programs developed, and then what sustained them through ongoing implementation. This research also focused on the challenges to implementation, so that the convention center industry has a better understanding as to the attributes of successful

convention centers and the challenges that they face. This will help the industry gain a better understanding of the cycle of convention center sustainability program growth in addition to the challenges that centers face as their sustainability programs become more advanced.

Definitions

For the purpose of this study, the subsequent defined nomenclature were:

- Buy-In ─ Three different books provided similar definitions to the term buy-in. Troy and Conference Board (1991) defined buy-in as "commitment to change, participation, ownership and empowerment." Walton (2004) defined buy-in as "the specific action(s) desired from a target audience in support of a person, idea, product, service, or organization" (p. 99). Sharon (2012) added that for individuals to have buy-in, they needed to "believe in it, act upon results, support it, champion it, or evangelize it." This concept is similar yet different from the concept of perceptions in that it is approval based, and participatory. Buy-in exists for individuals on a spectrum. For instance, if an individual has high organizational buy-in, they may support the organization, and the majority of organizational policies but they may not agree with everything. This buy-in ranges by individual people, and by topic.
- Certification ─ A certification is a "procedure that assesses, audits, and gives written assurance that a facility, product, process, or service meets specific standards" (Honey & Rome, 2001, p. 8). Sustainable certification programs often include voluntary codes of conduct or sustainable tourism criteria, environmentally

conscious awards, or accreditations and certification schemes (Buckley, 2002).

- Complex Adaptive Systems ─ John H. Holland (Waldrop, 1992) who defined complex adaptive systems (CAS) as:

> …a dynamic network of many agents (which may represent cells, species, individuals, firms, nations) acting in parallel, constantly acting and reacting to what the other agents are doing. The control of a complex adaptive systems tends to be highly dispersed and decentralised. If there is to be any coherent behaviour in the system, it has to arise from competition and cooperation among the agents themselves. The overall behaviour of the system is the result of a huge number of decisions made every moment by many individual agents. (p. 145)

Allen and Varga (2006) added to the definition by stating that CASs have four consistent traits. First is emergence: implying that the attributes of a system relate in seemingly haphazard ways. Yet through the interactions, patterns arise and affect the performance of the components within the system, and the system as a whole. Second, a CAS has co-evolution: It resides in a given environment, but also affects that environment, so that as the situation changes, the system adapts to meet the circumstances while also changing the environment itself. Third is connectivity: this relates to the pathways in which the components of a system connect and associate to each other, leading to pattern formation, and the sharing of feedback. Many times in CASs, the relationships between the components are considered more essential than the components themselves. Fourth, CASs are self-organizing: CASs are continuously reorganizing, and learning with environmental changes in ways that occur outside of any strict hierarchal order. This lack of hierarchy in the system or self-organization referenced is not to be confused with an organizational hierarchy; this is specifically related to the functionality of systems, organizations included.

- Conference ─ Gatherings of people ranging from 10 to 100,000 people (Law, 1993), held in hotels, conference centers or convention centers (Nelson, 1999). "Among the activities that are considered conferences are corporate strategy meetings, intergovernmental summits, academic seminars, religious symposiums, political conventions and annual meetings" (Nelson, 1999, p. 23).
- Convention ─ A convention is a gathering of individuals with a joint purpose or to share ideas, understandings, and news on a common topic to the group (Ladkin, 2002). "A convention may or may not include a trade show or exhibition" (Nelson, 1999, p. 23). A convention is larger than a conference and typically utilizes a convention center or a large convention hotel (Nelson, 1999). "Common features include educational sessions, committee meetings, social functions, and meetings to conduct governance business of the organization" (Rogers, 2013, p. 398).
- Convention Center ─ Convention centers may differ in shape and size, though at minimum have the ability to host at least 100 people (Nelson, 1999). A convention center is a venue that contains:

  > …one or more exhibit halls and includes breakout or meeting rooms. The lobby of a convention center is typically larger and more elaborate than that of an exhibition hall. Most convention center lobbies are designed to comfortably handle attendee registration and may also be used as staging areas for receptions. Other amenities typically included in convention centers include kitchens, banquet rooms, business centers, and theater style assembly areas. (Nelson, 1999, pp. 28-29)

  - Tier I Convention Center ─ A phrase used to classify convention centers containing a minimum of one million square feet of prime exhibit space (Anderson, 2014). Otherwise known as "Millionaire's club" convention centers (Anderson, 2014). There are 10 of these convention centers in the

United States.

  - Tier II Convention Center ─ A phrase used to classify convention centers containing a minimum of 350,000 square feet of exhibit space, and maximum of 999,999 square feet of exhibit space (Anderson, 2014). Otherwise known as "Mega convention centers" (Anderson, 2014). There are 30 of these convention centers in the United States.

- Exhibition or Tradeshow ─ Exhibitions and tradeshows are commercial activities that offer short-term displays of model merchandise (Nelson, 1999). The purpose of a tradeshow is to enable trade between buyers and sellers (Nelson, 1999). Most tradeshows are held at convention centers and may run from 1 day to a number of weeks, however on average lasting from 3 to 5 days (Nelson, 1999). They may also require meeting rooms for additional seminars, trainings or other events that run alongside the show (Nelson, 1999). Exhibitions are typically organized by professional trade associations, an organization affiliated with a convention center or by an organization that specializes in exhibition planning (Nelson, 1999).
- Meetings ─ The word meeting is the umbrella term for the gatherings mentioned in the definitions. A meeting is "an event where the primary activity of the participants is to attend educational sessions, participate in discussions, social functions, or attend other organized events" (Rogers, 2013, p. 407). The meeting, conference, and convention industry are many times compiled together as most conventions and conferences also include smaller meetings (Nelson, 1999).
- Perception ─ Merriam-Webster's Dictionary (2015) defines perception as, "the way you think about or understand someone or something" (¶ 2). This concept is

similar yet different from the concept of buy-in in that there is no positive or negative connotation with the definition, nor is it action-oriented; it is instead thought-based.

- Sustainability ─ The Global Sustainable Tourism Council defines sustainability as, "use of resources, in an environmentally responsible, socially fair and economically viable manner, so that by meeting current usage needs, the possibility of its use by future generations is not compromised" (2015, ¶ 147). Sustainability will be operationalized by the social, economic, environmental, and institutional (institutional, governance, and ethics) aspects of a system, in addition to the interactions between the four components within the system of sustainability.

Delimitations

The case study was delimited to three U.S. certified sustainable tier I or II convention centers (containing a minimum of 350,000 square feet of exhibit space). In addition, only full-time convention center employees (not including contract workers), above the age of 18 years old, were be permitted to participate in the study.

Limitations

The following items were limitations of the study:

1. The size of the sample and time available for conducting interviews caused by finite financial resources limited the study.
2. The availability of the respondents limited the interviews, which affected the sample size, and the length of the interviews.

3. The study was limited by access to the full-range of potential employees
4. Sampling was limited to three cases and may not be generalizable to all convention centers.
5. Participants in the study had varying levels of knowledge about sustainable tourism certification, which may have affected their ability to contribute to the study.
6. Participants may have had differing experiences with sustainable tourism certification programs, depending on which program they elected to participate in.

Chapter Summary

This dissertation encompassed five chapters to help understand sustainability programs in three U.S. certified sustainable convention centers. The initial chapter was comprised of the study background, theoretical framework, problem, purpose of the study, significance, delimitations, a definition of terms, and research questions. The subsequent chapters provided more detail regarding the state of the industry and the completed study.

Chapter 2 provided a review of the literature. This chapter included the development and literature focused on tourism, convention centers, and sustainability. The chapter concluded by expanding on the use of Complex Adaptive Systems (CAS) theory as a conceptual framework. Chapter 3 covered the methods and methodology used for the study. The chapter included the type of case study research conducted, scoping of the research, the individual methods used, and purpose of using each method for the qualitative study. In Chapter 4 findings relevant to the development, implementation and

challenges of convention center sustainability programs as perceived by employees were summarized. I also summarized findings related to employees' perceptions of the role of the employee in the development and implementation of convention center sustainability programs. Chapter 5 included a discussion and conclusion of the dissertation, providing implications of the results, and recommendations for future search.

CHAPTER 2

LITERATURE REVIEW

In this chapter, relevant literature pertaining to the growth of tourism, conventions and convention centers, the impacts of tourism and convention centers, sustainability in tourism and certification, and Complex Adaptive Systems (CAS) theory were reviewed. The discussion was divided into several sections: 1. Growth of tourism, conventions, and convention centers; 2. Development of sustainable tourism; 3. Convention centers and development; 4. Sustainable tourism certifications; 5. and Complex Adaptive Systems theory.

Growth of Tourism

Since the middle of the 20th century, there has been substantial growth in tourism globally. In 1950, the United Nations World Tourism Organization (2016) recorded 25 million international tourist[1] arrivals. Since that time, international tourist arrivals have grown to 1.133 billion in 2015 and are expected to increase to 1.8 billion by 2030 (World Tourism Organization (UNWTO), 2016). In addition, there were approximately 5 to 6 billion domestic tourists in 2015 (UNWTO, 2016).

[1] Tourists are defined as "travel to and stay in places outside their usual environment for more than twenty-four hours and not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited" (United Nations World Tourism Organization, 1995, p. 14).

Tourism has contributed $7,170 trillion to the world economy and 10% of the global gross domestic product (GDP) through direct, indirect, and induced impacts (UNWTO, 2016). Tourism accounts for 1 in 11 jobs internationally and 7% of the world's export services (UNWTO, 2016). The economic impact of tourism is significant in many ways. For example, tourism creates more employment than the financial/ banking industry, mining, and education (World Travel & Tourism Council, 2015).

The U.S. Travel Association (2016) categorizes tourism into two primary categories, leisure and business travel. Within the business travel sector are also two categories, general business travel and meetings, incentive travel, conventions, and events (MICE). In 2015, the United States (U.S.) tourism industry contributed $1,469.9 billion to the global economy, more than in any other country, and is expected to increase by 2.8% for 2016 (World Travel & Tourism Council, 2016). The direct, indirect, and induced spending in 2015 increased to $1.2 trillion and domestic and international business travelers' spending increased to $296.3 billion (U.S. Travel Association, 2016a). One of the primary causes for the growth in business travel was the MICE industry which increased its spending by 6.6% in 2015 (U.S. Travel Association, 2016b). The MICE sector is reliant on event venues and convention centers in particular, as many of the conferences, conventions, events, and meetings take place within convention centers.

Conventions and Convention Centers

Historical Overview

Events, meetings, and conventions have a long history dating back before to the beginning of civilization.

> …Archeologists, in their investigations of ancient cultures, had found primitive ruins that functioned as common areas where people would gather to discuss communal interests, such as hunting plans, wartime activities, negotiations for peace, or the organization of tribal time activities, negotiations for peace, or the organization of tribal celebrations. (Montgomery & Strick, 1995, p. 4)

Meetings progressively grew in size, as populations increased, leading to the eventual development of conventions. The word convention originally stems from the Greek word conferential which means "to bring together" (Thompson, 1995). However, the industrial revolution brought about the growth of commerce, and industry centers (Weber & Chon, 2002). With the growth of business, people developed an eventual need for large meetings, leading to a demand for meeting facilities and finally convention centers (Weber & Chon, 2002). The development of the meeting and convention industry resulted in the subsequent spread of associations and convention bureaus. Destinations and organizations formed convention bureaus to help meet the growing needs to solicitude business from people attending annual membership meetings and gatherings for business, religious purposes, recreation, politics, and other purposes (Weber & Chon, 2002). By the 1970s, 6.5 million square feet. of convention space were present in the United States. The available convention space expanded to 18 million square feet by 1990 (Kock, Breitera, Hara, & DiPietro, 2008), and estimated 56,426,300 square feet in 2013 (Jensen & Anderson, 2013).

Since the early days of convention centers, there were two significant periods of growth, the new growth (beginning in the 1980s and ending in the 1990s), and expansion phase (between the 1990s to the present) (Ghitelman, 1995). The new growth phase was a time when destinations built a plethora of convention centers around the United States. The expansion phase referenced the eventual increase in square footage added to many of

the established convention centers. During the new growth period, 12 large convention centers were built in primary markets including New York, San Francisco, Orlando, Washington, D.C., New Orleans, Houston, Seattle, and San Diego (Kim, Morrison & Mills, 2004). These centers were the impetus for the development of over 300 operational convention centers by the end of the 1980s within the United States (Fenich, 1992). Within the expansion phase, cities spent their money developing the growth of existing facilities instead of focusing on new construction efforts (Ghitelman, 1995; Nelson, 1999). The reason for the expansion was that urban areas sought positive gains from the meetings industry (Fenich, 1992; Kim et al., 2004). As one of the most resilient forms of tourism, MICE remains highly desirable for local governments (Weber & Chon, 2002). Unlike other aspects of the tourism industry, the convention center industry is relatively immune to challenging economic times, leaving the industry successful in both peak and off-peak seasons (Weber & Chon, 2002). In addition, convention centers entice tourists who not only spend a significant amount of money but also stay longer and are more likely to return to a destination than the average tourist (Weber & Chon, 2002). Destinations value hosting international conferences, as they bring international recognition (Weber & Chon, 2002). While convention centers have both positive and negative impacts on communities, these centers are complex in nature, with ownership, size, and amenities varying greatly.

Convention Centers Today

Nelson (1999) defined a modern convention center as a venue that contains one or more exhibit halls, breakout rooms or meeting rooms, lobby, and may offer amenities of

kitchens, banquet rooms, business centers, and theater style seating. Convention centers vary in size, usually containing at least enough space for 100 people (Nelson, 1999). While both public and private convention centers exist, the World Tourism Organization (2014) estimated funding for approximately 75% of convention centers came from public support or some type of taxation.

Through an extensive review of 307 convention centers in North America, Anderson (2014) developed four "tiers" or categories of convention centers based on square footage of available exhibit space. For a convention center to be considered first tier or part of the "Millionaire's Club," they needed a minimum of 1 million square feet of prime exhibit space. As seen in Table 2.1, there are 10 first tier convention centers in the United States that account for 4% of the convention centers, and most interestingly 26% of the total exhibit space or 14,670,838 square feet (Anderson, 2014; Jensen & Anderson, 2013). Second tier convention centers or "Mega Convention Centers" made up 13% of the North American industry, and 30% of the available exhibit space in the United States at 17,285,922 square feet, with 30 located in the United States. The size of mega convention centers ranged from 350,000 square feet to 999,999 square feet (Jensen & Anderson, 2013). Combined, the 40 U.S. tier I and tier II convention centers accounted for 17% of the total number of convention centers yet 56% of the total available exhibit space in the United States. Tier I and II convention centers were seen as more established centers, in primary markets for conventions and meetings, and included world-class hotels, transportation, and locations within cities that had attractive reputations (Brezina, 1999). Tier I and II convention centers account for 31,956,760 square feet of exhibition space, and 77% of the North America Convention Center market (Jensen & Anderson,

Table 2.1 Convention Centers Sizes and Classifications*:* 350,000 square feet or More of Prime Exhibit Space

Metric	U.S./ Canada/ Mexico	U.S.	Canada	Mexico
Total Number of Millionaire's Club & Mega Venues	52	40	7	5
Total Square Feet of Prime Exhibit Space	38,544,151	31,909,728	4,232,000	2,402,423
Prime Exhibit Space Mean	741,234	797,743	604,571	480,485
Sizes of U.S. Convention Centers				
	Number of Convention Centers	Total Square Footag	Percentage of Overall Square Footage	Percentage of Venue Classifications
Tier I: Millionaire's Club- 1,000,000+ square feet	10	14,670,838	26%	4%
Tier II: Mega Centers- 350,000-999,999 square feet	30	17,285,922	30%	13%
Tier III: Mid-Sized- 150,000-349,999 square feet	70	13,706,304	24%	26%
Tier IV: Smaller Facilities- 50,000-124,999 square feet	174	11,390,212	20%	57%

Note. Adapted from "Trade show executive's annual review of the mega convention centers and millionaire's club" by Tormohlen, D., 2014, *Trade Show Executive,* pp. 46-54. Copyright 2014 by Trade Show Executive.

2013).

With a number of attractions to offer (i.e., entertainment, culture, and commercial options), large cities have continued to be the most desirable locations for conventions and events; this was seen to present challenges for small- and medium-sized cities in the recruitment and retention of larger conventions (Law, 1993). Many have argued that with proper planning, tourism (and convention centers in particular) has the potential to create positive social change, to help alleviate poverty, increase education, health, welfare, the building of communities and the development of partnerships (Bricker et al., 2013; Foley, Schlenker, Edwards, & Hayllar, 2010). One of the ways that the tourism industry has worked to create positive change and to manage the negative impacts is through the implementation of sustainable practices. The next section provides details on the justification and background of sustainability in tourism and convention centers.

U.S. MICE Industry

In 2012, there were 1.83 million meetings (meetings, conventions, conferences) worldwide with approximately 225 million participants in the United States alone (PricewaterhouseCoopers (PWC), 2014). Of the $865 billion in direct travel and tourism sales, an estimated $130 billion came from the meeting industry or approximately 15% of the direct sales (PWC, 2014). Despite the size and breath of the MICE industry, there remains a lack of comprehensive data on the industry, which may be in part due to the absence of a single governing body representing MICE. About half of the direct expenditures from events surface as nontourism-related spending (i.e., mobile apps, exhibition stands, audio-visual, etc.), and are not incorporated into traditional tourism

accounting statistics because most organizations collect data specific to their unique facet of the industry instead of the industry as a whole (Ladkin, 2002; UNWTO, 2014, March).

Statista (2015) estimated in 2012 that the U.S. meeting industry had an economic contribution of $770.38 billion, which included direct, indirect, and induced effects. The U.S. Travel Association (2016) estimated that MICE accounts for $121.9 billion in spending, $19.9 billion in taxes and 1 million jobs within the United States. In 2013, the United States had the second largest number of meetings in the world (next to Singapore) with 802 conferences (Union of International Associations Statistics Report, 2013). While exact measures of the size and contributions of MICE lack globally, it is clear MICE has a significant role within in the U.S. tourism industry (PWC, 2014).

Sustainable Tourism

In the 1960s and 1970s, an emergent movement argued that capitalism's focus on materialism and consumerism were depleting natural resources (Swarbrooke, 1999). During that time, a number of influential books were published that acknowledged the impacts of economic growth on the social, and environmental aspects of societies. Some of the books included, Carson's (1962) *Silent Spring*, Ehrlich's (1968) *Population Bomb*, Meadows and Meadows' (1972) *The Limits to Growth* (Swarbrooke, 1999; Weaver, 2006). At the same time, there were waves of regulations placed in the United States focused on the natural environment including: the Clean Air Act, Water Quality Act, Wild and Scenic Rivers Act, National Environmental Policy Act, Marine Mammal Protection Act, Endangered Species Act, among others (WGHB Education Foundation, 1996-2017). In addition to regulations, the U.S. federal government created a number of

agencies to protect individuals and the natural environment including: the National Resource Defense Council (NRDC), Environmental Protection Agency (EPA), National Oceanographic and Atmospheric Administration (NOAA), Department of Energy and others (WGHB Education Foundation, 1996-2017). At the same time, there arose a cautionary platform within the tourism industry, viewing unregulated tourism development as destructive to the economic, social, and environmental wellbeing of communities: particularly for local residents who were the most deeply affected (Weaver, 2006). As time progressed, more people and organizations began to support the call for change in the tourism industry.

By the 1980s, there was a unification of conservation and tourism organizations that led to the research and development of sustainability within the industry. The term sustainability first came to the spotlight through the publication of *Our Common Future* otherwise known as the *Brundtland Report* (World Commission on Environment and Development, 1987). Published by the United Nations World Commission on Environment and Development, the document was an urgent plea, stating that the world must begin to economically develop in a way that does not deplete natural resources or harm the environment. The report also gave a clear definition of the term "sustainable development," which has since been used by countries and businesses as a goal for environmentally and socially responsible practices (Makower, 2009). The Brundtland Report defined sustainable development as, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 41). The Brundtland Report provided a significant focal point for changes to come from people, organizations,

and industries.

Though the Brundtland report did not specifically identify the tourism industry, it did inspire thinking in industry related ideas. The tourism academy began to adapt the concepts of sustainable development to their understanding of tourism. Butler (1993) defined sustainable tourism as a separate entity from sustainable development by stating that sustainable tourism is tourism that can sustain its viability in an environment for an indefinite amount of time. Yet, he defined sustainable development in the context of tourism as:

> Tourism which is developed and maintained in an area (community, environment) in such a manner and at such a scale that it remains viable over an indefinite period and does not degrade or alter the environment (human and physical) in which it exists to such a degree that it prohibits the successful development and wellbeing of other activities and processes. (Butler, 1993, p. 29)

Since Butler (1993) linked the term sustainable development to tourism, the term sustainable tourism has become a commonly used term in the literature. It covers an approach to tourism that acknowledges the importance of the host community, treatment of staff and the maximization of tourism economic benefits for host communities and the natural environment (Swarbrooke, 1999).

More recently, in 2012, world leaders came together for the United Nations (UN) Conference on Sustainable Development or the Rio 20+ Summit with the focus of both "a green economy in the context of poverty eradication and sustainable development, and an institutional framework for sustainable development" (United Nations Steering Committee on Tourism for Development, 2011, p. 2). This conference placed tourism on the global development agenda as a key way to adopt a more green economy. Then in September of 2015, the General Assembly of the United Nations, in their 70th session

announced the 2030 Agenda for Sustainable Development in addition to 17 Sustainable Development Goals (SDGs) with the purpose of eradicating poverty, working towards equality and justice, and addressing climate change (United Nations World Tourism Organization (UNWTO, n.d.). Both the 2030 Agenda and the SDGs acknowledged tourism as a key component for accomplishing goals (UNWTO, n.d.). Subsequently, the UNWTO has been working to integrate the SDGs into their partnerships with governments, private and nonprofit organizations, banks and other financial institutions, and United Nations agencies, while putting a special emphasis on SDGs 8, 12, and 14, which have mentioned tourism (UNWTO, n.d.). SDG number 8 focuses on sustainable economic growth, and full, productive, decent employment (UNWTO, n.d.). The UNWTO (n.d.) estimated that tourism provides one in 11 jobs internationally; tourism is a primary source of income that has the potential to help individuals develop skills and develop as professionals. This employment is particularly important for women and children (UNWTO, n.d.). SDG 12 refers to sustainable consumption and production (UNWTO, n.d.). This goal references tools for impact monitoring to ensure that tourism creates jobs, promotes local culture, and locally made products (UNWTO, n.d.). Finally, SDG 14 discusses the conservation and sustainable use of oceans, seas, and marine resources (UNWTO, n.d.). The largest segments of tourism are coastal and maritime tourism, which rely on the health of marine ecosystems including, "sustainable management of fisheries, aquaculture, and tourism" (UNWTO, n.d., ¶ 5). The 2030 Agenda and SDGs both play an important role for government and organization sustainability planning and a key component mentioned in both is the environmental, social, and economic aspects of sustainability. The following section discussed the

environmental, social, and economic aspects of sustainability in greater detail.

The "Bottom Line" for Sustainable Tourism

Historically, sustainability in tourism and elsewhere have included what some refer to as the "triple bottom line:" (3BL) the 1) social, 2) environmental, and 3) economic attributes of a situation, destination, or organization (Norman & MacDonald, 2003; Springett, 2003). The 3BL has become a commonly used phrase in corporate business, governments, nongovernmental organizations (NGOs), activist groups, and academia. Through marketing, publications, and recognition from small to large corporations, the 3BL has gained a foothold as one of the most commonly used phrases when describing sustainability in tourism (Norman & MacDonald, 2003). Organizations and individuals who support the use of the 3BL argue that the long-term success of an organization is reliant on ongoing "profitability" from all three bottom lines (Brown, Dillard, & Marshall, 2006). Organizations and individuals who utilize the concept of the 3BL also feel that the bottom lines should be measured, reported, and assessed regularly, in a similar fashion to the previous financial reporting model (Brown, Dillard, & Marshall, 2006). In fact, "61% of corporate leaders believe that sustainability leads to market differentiation and improved financial performance" (U.S. Green Building Council, 2015, p. 8).

After the 3BL's conceptual development, various researchers have worked to operationalize the 3BL through the development of indicators to assess and report the three bottom lines. Organizations have utilized the 3BL to operationalize their sustainability reporting. Slaper and Hall (2011) argued that the prevalence of the 3BL

concepts have grown in popularity for businesses all over the world because of the unsubstantiated data that 3BL reporting can lead to increased long-term profitability. For example, by changing lightbulbs to more energy efficient CFL or LED lightbulbs, companies can save on energy costs. An immediate and vital question many ask is, 'how can the 3BL concept be implemented?' Elkington argued that integration of the 3BLs is impossible because each bottom line is separate (as cited in The Economist, 2009). However, many have had extensive trouble actually separating the individual components when looking at the indicators for sustainability (Clayton & Radcliffe, 1996; Miller & Twining-Ward, 2005). Despite these difficulties, many individuals have continued to strive to develop better indicators for 3BL sustainability and certifications for those indicators in the tourism industry (Clayton & Radcliffe, 1996; Honey, 2008: Miller & Twining-Ward, 2005). The Economist (2009) argued that the 3BL could be important in insuring that organizations are recording what they are accomplishing, as if on a report card: "what you measure is what you get, because what you measure is what you are likely to pay attention to. Only when companies measure their social and environmental impact will we have socially and environmentally responsible organizations" (para. 2).

Economic externalities are often complex and hard to recognize, measure, and to calculate due to the interconnectedness of the components within the 3BL. For example, the cost of air pollution to a city includes not just eventual required health care for the community but also necessary cleanup expenses. These externalities present challenges such as unequal power relations, as many times those with lower incomes, disabilities, seniors or are homeless, end up living in previous superfund sites, or in locations with poor air quality leading to negative health consequences (Torras & Boyce, 1998). These

externalities can be hard to recognize, and measure; it is also a challenge to calculate the financial costs, due to the interconnectedness of the components within the 3BL. Though many have argued these and other challenges with the 3BL, it is still a commonly used term. Organizations and researchers have continued to use the term and have conducted studies focusing on the 3BL in the tourism industry.

Many scholars have argued for an additional element to the triple bottom line; however, there remains considerable disagreement as to what the fourth element entails (Cottrell, Vaske, & Roemer, 2013; Teriman, Yigitcanlar, & Mayere, 2009; Wight, 2007). Researchers have proposed concepts surrounding institutional, governance, or ethical sustainability as a fourth bottom line. *Institutional* has typically been described as large scale and has incorporated leadership in a range of contexts (i.e., global, national, and organizational levels; Cottrell, Vaske, & Roemer, 2013). *Governance* has referenced the ways in which an institution or organization governs or manages people (Teriman et al., 2009; Wight, 2007). *Ethics* has referred to choices made at the individual level (Wight, 2007). This study defines sustainability as a four-vector concept including environmental, social, economic, and institutional components (as an umbrella term covering all three concepts). This definition of sustainability incorporates the importance of all these ideas components. Ultimately, there is agreement that various components of sustainability are connected and must be thought of comprehensively to achieve sustainability goals (Cottrell, Vaske, & Roemer, 2013; Teriman, Yigitcanlar, & Mayere, 2009; Wight, 2007).

Environmental Sustainability

Tourism has the potential to both negatively and positively affect the natural environment. “Each year, international and national tourists use 80% as much primary energy as Japan produces, create the same amount of solid waste as France (35 million tons per year), and consume three times the amount of fresh water contained in Lake Superior” (Honey & Krantz, 2007, p. 17). The effects of tourism cause various stresses on the world because of resource use (water, land, trees, coal, or petroleum), waste, and pollution (greenhouse gas emissions, contamination of groundwater and waterways). In addition, according to the World Economic Forum, “The Travel and Tourism (T&T) sector’s current contribution to global greenhouse gas (GHG) emissions is 5% of global anthropogenic emissions” (Chiesa & Gautam, 2009, p. 3).

Swarbrooke (1999) detailed the scope of the environment affected by tourism. He explained that the scope of the term ‘environment’, breaking it down to the natural environment, and the built environment (Figure 2.1). He then described the effects of tourism on the environment through the potential consequences to floral and faunal species composition, pollution, erosion, natural resources, and visual impacts. The impacts of tourism can range from pollution of the ocean with sewage or fuel from boats, resource consumption, and to the cutting down of rainforests to build resorts.

While much research has emphasized the negative impacts of tourism on the natural environment, tourism can also have beneficial impacts on the environment. Tourism has the ability to motivate people (both locals and tourists) to work towards conservation, preservation, and restoration of the natural environment through positive management strategies; tourism can provide individuals with environmental appreciation

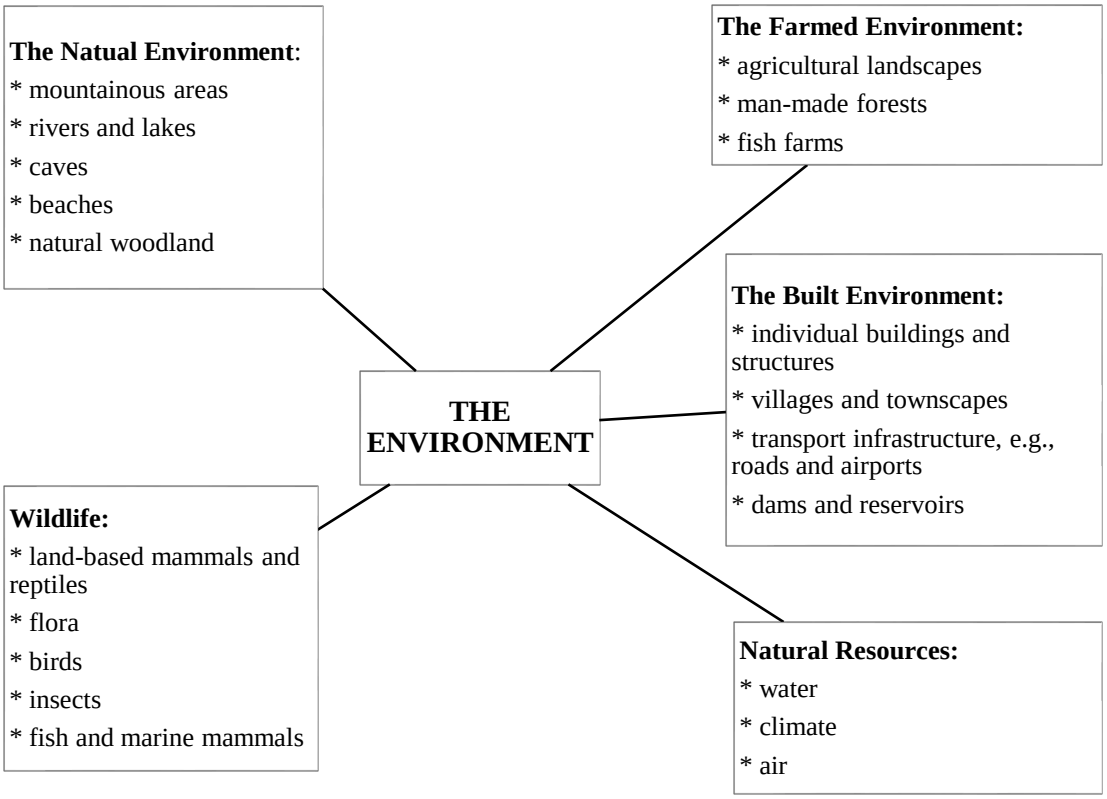


Figure 2.1. The scope of the environment affected by tourism. Adapted from "The Scope of the Concept of the Environment" by J. Swarbrooke, 1999, *Sustainable Tourism Management*, p. 50. Copyright 1999 by CABI.

through education and awareness; and tourism has the potential to inspire activism (Bricker, Black, & Cottrell, 2013; Goodwin, 2011; Mathieson & Wall, 1982; Swarbrooke, 1999). Goodwin (2011) also argued that tourism has the ability to raise the capacity of stakeholder involvement to ensure implementation of the best practices for the current generation and future generations. The natural and built environment play an important role in the travel industry and both have the potential for positive and negative impacts from tourism.

Social Sustainability

The social component of sustainability refers to various impacts on communities, including equity, equality, ethics, and fair trade (Hubbard, 2009; Swarbrooke, 1999). The social component is complex and the most difficult to measure due to the inter-relationships between the social networks of organizations, suppliers, communities, and diversity of people. Social complexities include heritage, language, gender, sexuality, religion, lifestyles, values, and behaviors (Swarbrooke, 1999). When discussing sustainability, the social dimension of tourism has been of less focus than the environmental impacts (Swarbrooke, 1999). This may be due to the idea that socio-cultural impacts can take longer to appear or can simply be invisible due to their intangibility (Swarbrooke, 1999). History has shown that tourists have affected the destinations they visit through shared disease, alternative worldviews, growth in crime, lack of cultural understanding, loss of spirituality, construction of nontraditional architecture, among others (Swarbrooke, 1999). Increased tourism can make a location less desirable as the environment and culture change to become less authentic (Harris,

Griffin, & Williams, 2002). Tourists have also shown interest in preserving native languages, helped to develop new markets for local art, become more culturally aware of the diversity in the world, positively affected the local community through shared values (e.g., treatment of animals, sexual exploitation) (Bricker, Black, & Cottrell, 2013; Goodwin, 2011, Mathieson & Wall, 1982, Swarbrooke, 1999). In addition, local communities have benefited from tourism through increased infrastructure, education, bringing various stakeholders in a community together and increasing communication, sharing authenticity of culture through education of tourists, improved community health (Bricker, Black, & Cottrell, 2013; Goodwin, 2011, Mathieson & Wall, 1982, Swarbrooke, 1999). With proper planning, tourism has the potential to create positive social change, to help alleviate poverty, increase education, health, welfare, the building of communities and the development of partnerships (Bricker, Black, & Cottrell, 2013).

The social dimensions of tourism are twofold. First, there are the employees of an organization: power dynamics between individuals, living wages, happiness levels, maternity leave policies, vacation time, etc. (Swarbrooke, 1999). The second piece regards the tourists and the local communities affected by tourism. The social components of sustainability relating to employees are broad as they can affect different stakeholders in different ways (Swarbrooke, 1999). Swarbrooke (1999) discussed the social components of sustainability as equity of stakeholders; equal opportunities for employees and tourists alike; ethics and honesty with tourists, suppliers, governments and locals; and equal partners or tourists treating those who work in hospitality as equals instead of inferiors. Tourists can also increase the need for security, create traffic congestion, affect the functionality of public transit, and reduce business for areas

sectioned off for tourism (Rogers, 2013). Some have viewed the social components of events as a social legacy left for a community, or how meetings and incentive trips can affect local communities through both the people and the economy (Rogers, 2013). Some argue greater corporate social responsibility (CSR) policy integration is required for social legacy activities to be affective (Rogers, 2013). CSR is a newer initiative in the convention and conference industry, and even newer for convention centers. Though not a topic of much academic discussion in the convention literature, CSR is a more recent topic for the industry literature (Grimaldi, 2012). The challenge with CSR may be that there is no 'one way' to implement CSR; it is unique to every organization (Knez-Riedl, Mulej, & Dyck, 2006). Knez-Riedl, Mulej, and Dyck (2006) argued that for CSR to be successful, one must assess an organization from a systems perspective, taking the understanding that organizations have interrelated parts that cannot be viewed as separate from one another. Bell and Morse (2008) built upon this argument by discussing the multiple views of sustainability from various stakeholders in organizations. Donors, project managers, implementers and beneficiaries all have interlinked needs and priorities that are part of a functioning system containing varied levels of power (Bell & Morse, 2008).

> If the views between various participating groups in a project can vary on something as crucial and fundamental as the project goal, there is an even greater potential for differences of emphasis and comprehension on an idea as vague as sustainability. (p. 144)

Bell and Morse (2008) described the challenges in the social system of an organization in relation to the various stakeholders. By understanding that each stakeholder has a unique perspective and understanding of sustainability, an organization is better able to meet the needs of their stakeholders.

Tourists and locals in the tourism industry have worked in preserving native languages, helped to develop new markets for local art, become more culturally aware of the diversity in the world, positively affected the local community through shared values (e.g., treatment of animals, sexual exploitation) (Bricker, Black, & Cottrell, 2013; Goodwin, 2011, Mathieson & Wall, 1982, Swarbrooke, 1999). In addition, local communities have benefited from tourism through increased infrastructure, education, bringing various stakeholders in a community together, and increasing communication, sharing authenticity of culture through education of tourists, improved community health (Bricker et al., 2013; Goodwin, 2011, Mathieson & Wall, 1982, Swarbrooke, 1999). Foley, Schlenker, Edwards, & Hayllar (2010) argued for the many benefits of conferences and conventions on local communities. The social components of the events industry are vast. Table 2.2 details the many benefits of events on local communities, stressing that the benefits and outcomes can leave multiple legacies in a varieties of aspects of communities.

Economic Sustainability

The tourism industry is one of the world's major financial drivers and has the potential for both positive and negative impacts regarding economic support of communities, organizations, and social justice. Through owning and running organizations and land, community residents have the potential to keep money within a destination, to preserve and conserve natural areas, to have more resource rights, and control of tourism planning (Zeppel, 1998). However, no organization can survive without a management strategy that brings in a steady flow of income. Weaver (2006)

Table 2.2 Business Event Outcomes

Categories
Knowledge expansion • Growing local knowledge • Knowledge improving education • Knowledge improving professional practice
Networking, relationships and collaboration • Access to networking opportunities for local practitioners and researchers • Networking fosters creation of long-term relationships • Networking as a catalyst for knowledge expansion and research development • Networking as a catalyst for research collaborations • Research collaborations lead to development of new products and technologies
Educational outcomes • Opportunities for local postgraduate research students • Increased attractiveness of education sector
Fundraising and future research capacity • Fundraising opportunities • Greater access to government and/ or private sector funding sources
Raising awareness and profiting • Generating awareness of sector-specific issues • Raising awareness of broader societal issues • Profiling local organizations, associations, and/ or centers • A catalyst for government support
Showcasing and destination reputation • Showcasing local talent • Enhancing reputation as a leader

Note. Adapted from "Business Event Outcomes" by C. Foley, K. Schlenker, D. Edwards, and B. Hayllar, 2010, *A Scoping Study of Business Events: Beyond Tourism Benefits,* p. vii. Copyright 2010 by the School of Leisure, Sport, Tourism, University of Technology, Sydney.

argued that a lot of the tourism businesses that work to maximize their profitability face challenges. Many times stakeholders do not prioritize sustainability as part of their long-term strategic planning because of sustainability's immediate intangibility (Weaver, 2006). For a tourism business to have a future, they must consider sustainability as an imperative strategy. One example of the interconnections between economics and sustainability is in the financial cost on natural resources (air quality, beaches, wildlife, etc.), and intangible resources (such as cultural heritage) that tourism many times exploits (Bricker, Black, & Cottrell, 2013; Swarbrooke, 1999). Tourism also has the potential for direct financial benefits to local communities, which can lead to employment, poverty alleviation, increased education, community development, and improved health (Bricker, Black, & Cottrell, 2013).

Swarbrooke (1999) detailed the economic system of tourism (Figure 2.2). He described the complex relationships as a system between tourism spending and its impact on a local community. The diagram depicted the direct earnings, indirect earnings, induced earning (financial relationship between sectors), and leakage from spending depicting an interconnected economic system. Tourists spend money on hotels, shopping, and services. Some of this money leaks out of organizations and the community by expenditures such as national taxes, dividends, and the cost of food and supplies. Hotels, retail, and services offer themselves to wholesalers who will then sell these things to the primary sector (ex: travel agents), secondary sector (ex: tour operators), or households; however, some of the money from the wholesalers leaks for other taxes, dividends, and supplies. The wholesaler, the second sector, the primary sector, and the local workers make money from the venture while offering a service to the client. The secondary sector

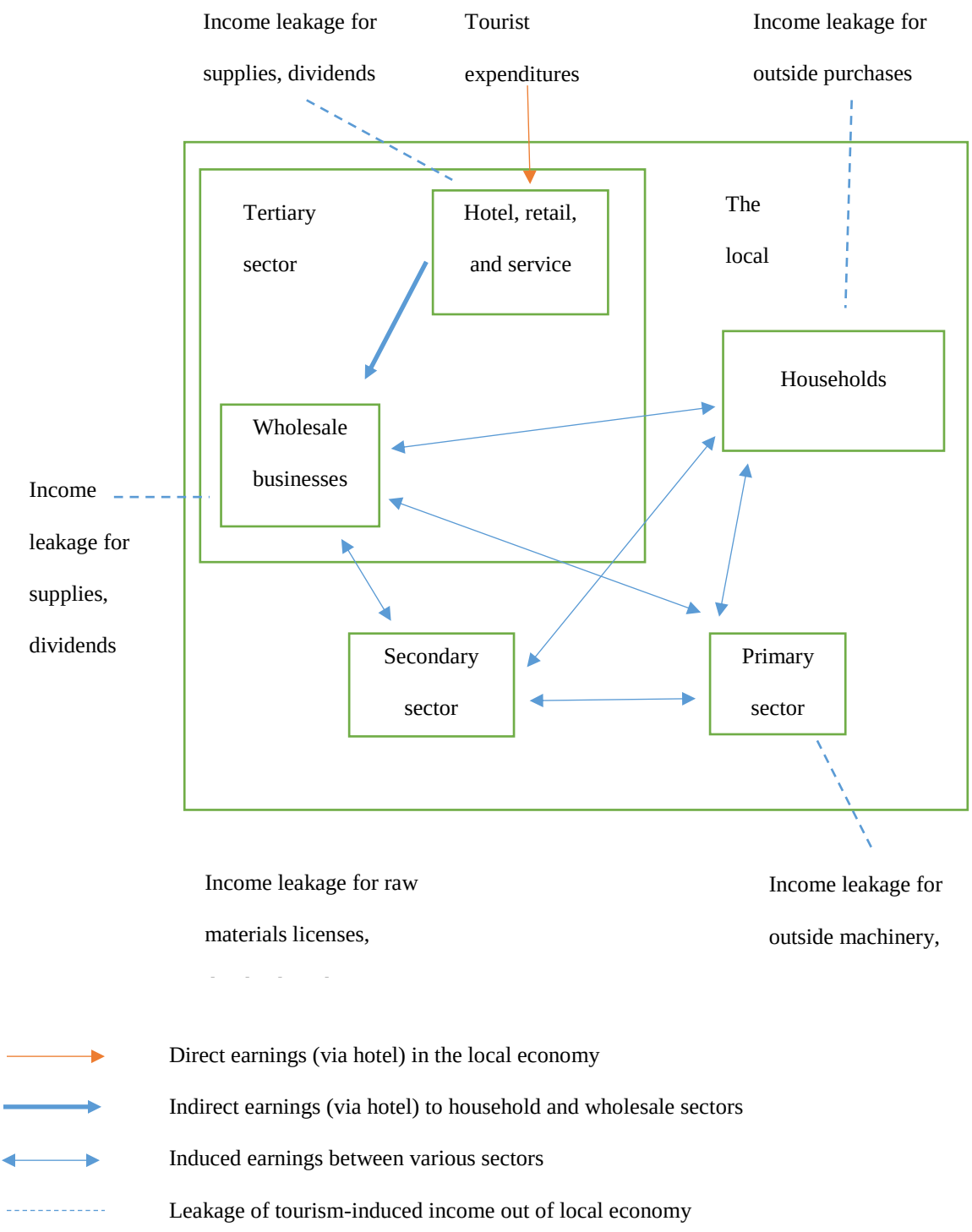


Figure 2.2. The economic system of tourism. Adapted from "The Economic Impact of Tourist Spending" by J. Swarbrooke, 1999, *Sustainable Tourism Management*, p. 60. Copyright 1999 by CABI.

then sells the services to the primary sector, and which creates jobs for the local communities while providing a service to the tourists. The primary sector supports local workers but can also lose money to taxes, dividends, and supplies. Households or local workers also leak money to taxes and outside purchases that do not support the community. Each of the components within the system is dependent on each other for financial gains and most leak money for various reasons. These sales support both the tertiary sector and the local community. The figure is important because it depicts a simple version of the economic tourism system, which is part of a larger system of sustainability.

The Missing Component

Recent studies have expanded the economic, social, and environmental pillars of sustainability through the addition of a fourth pillar. However, despite the arguments for a fourth bottom line, there has not been a consistent consensus as to what the fourth bottom line refers to. Various researchers have written the fourth component of sustainability as institutional, governance, and ethics. However, the three terms are interlinked through similar concepts at varied scales. Institutional, governance, and ethics can refer to the world, individual countries, regions, and destinations. Institutional, governance, and ethics can also be in reference to the management of organizations. These terms also have differences in their definitions. The following section will discuss the scales, similarities, and differences between the terms that various researchers have used.

Institutional

The first mention of the institutional aspects of sustainability as a driving factor came from the 1992 United Nations (UN) Rio Earth Summit (United Nations, 1992). The UN developed a set of indicators for sustainability, which they broke into dimensions relevant to economic, environmental, social, and institutional components of sustainability. The fourth chapter was institutional aspects of sustainable development, which they related to decision-making, science, and strengthening of stakeholder groups (Bell & Morse, 2008).

Bell and Morse (1999) defined institutional sustainability as regional, and national governments, government agencies or ministries, international organizations, aid agencies or nongovernmental institutions. These institutions contain defined parameters, involving a group of people and physical structures. They viewed the institution of sustainability as having two primary and sometimes competing meanings (Bell & Morse, 1999). Both refer to the question of the sustainability of an organization or institution. First, does the organization require money to continue? Second, will the institution be able to sustain in the long-term? For instance, one may view a sustainability program in a city as the institution of sustainability, as it could work to bring organizations, departments, councils, etc., together for the same cause. They specified that the institutional components are many times interlinked with power differentials between the various stakeholders. While Bell and Morse (1999) did not clearly assert that this component of sustainability requires the well-being of the social, environmental, and economic factors, the questions that they used to define the term do require the success of the other three.

Valentin and Spangenberg (2000) defined institutional sustainability as a reference "to human interaction and the rules by which they are guided, i.e., to the institutions of the society" (p. 382). Since that time, others have written of the institutional aspects of sustainability as a way of managing, mediating, and facilitating growth (Cottrell, Vaske, & Shen, 2005; Spangenberg, 2002; Spangenberg & Valentin, 1999). Cottrell, Vaske, and Shen (2005) said that the institutional components of sustainably should highlight participatory decision-making which could include participation and inclusion of the public. They added that, "the institutional dimension calls for strengthening people's participation in political governance" (p. 338). Cottrell, Vaske, and Roemer (2013) added that the institutional components emphasize social capital in the form of government institutions, community organizations, network connections and relationships, partnerships and collaborations, and participatory planning.

Governance

Much of the literature discussing the fourth bottom line as governance has discussed the concepts from an international perspective. The need for continued governance could also be made at various smaller scales as well such as regional, state, and city governments. Elliot (1997) said that the responsibility for establishing objective and prioritization, for policy formulation, and implementation lies with the government. Harms (2013) further built on Elliot's argument by stating that, "governments have yet to take a stand on sustainable tourism. Although some national sustainable tourism development strategies and regulatory frameworks seek to incorporate sustainability,

most of the efforts in this area occur at a state or provincial level" (p. 304). Another important illustration of the need for further government involvement in the sustainability discussion came from Bendell and Kearins (2005) who said that voluntary attempts at certifications and public disclosure are not enough. Government regulations should require transparency from corporations. Bendell and Kearins (2005) also argued that one of the challenges lies in government mismanagement and corruption. Lehman (2002) expressed that international capitalism is working towards promoting a 'democracy of the elites' where the role of the state and democracy has been narrowed to a select few. CorpWatch (2001) stated that "behind the green PR is a deeper corporate strategy: to get the world's governments to allow corporations to police themselves through voluntary codes of conduct, win-win partnerships and best practices learning models, rather than binding legislation and regulation" (¶ 18). For the industry to move forward, governments need to become involved in the ethical questions related to tourism management and create policies to help them govern. One could, however, argue that the government is a small piece of the pie. Voluntary programs are already working to create positive change, organizations are working to implement sustainable practices without certifications, and existing partnerships. Instead, one could question why governments have not made larger attempts to reward voluntary efforts and support sustainable tourism planning.

Research has also referenced a "fourth bottom line" in terms of organizational governance, and policy. The policy component discussed by Huffadine (2000) is not simply in reference to governmental policy. It can also refer to organizational policy, such as the governing bodies of an organization that put policies in place, which then

affect the employees, suppliers, customers, etc. By maintaining the ability to create their own meaning of sustainability, businesses pose greater power (Levy, 1997) that often comes with a steep price borne by society. This power has led to "exploitation, repression, unfairness, asymmetrical power relations, distorted communication, and false consciousness that need to be addressed (Alvesson & Willmott, 1996) before business can claim to be supporting sustainable development with any authenticity" (Springett, 2003, p. 74). It also raises the question of who 'owns' the concept of sustainable development as with ownership can come control and power. However, organizations also have the potential for positive change, through creating policies that incorporate the 4BL.

Ethics

Wight (2007) discussed the fourth component of sustainability as ethics because of the decisions affecting local communities and the natural environment. Decisions cannot be based solely on the economic bottom line but ethics and policies must play a role in the allocation of tangible and intangible resources keeping in mind future generations (Wight, 2007). "Solutions to the problem of overuse and pollution are essentially a joint concern of national and local governments, developers, planners, and designers" (Huffadine, 2000, p. 7). As mentioned in the previous quote, one component of the ethical discussion is governmental involvement.

Peet and Bossel (2000) defined ethics as "all people have their basic needs satisfied, so they can live in dignity, in healthy communities, while ensuring the minimum adverse impact on natural systems, now and in the future" (p. 225). They

further discussed ethics in terms of the system of sustainability by building on the concept that ethics are dependent on mutual relationships between the systems and subsystems of sustainability. They explained the system by saying that for the social and environmental components of sustainability to maintain long-term equity and reciprocity, the system must also contain ethics. Ethics can be seen as a part of culture, government, society, policy, decision-making, and person-to-person interactions (Peet & Bossel, 2000). Ethics also relates to the various scales of the institution.

Institutional Sustainability

The last component of sustainability (i.e., 4BL), or institutional sustainability, is interpreted in a variety of ways and a number of different scales. Most definitions reference international, domestic, regional, city, and organization based planning. For the system of sustainability to function and maintain resiliency in the long-term, the various levels of the institution must be in some harmony (Meadows, 2008). It is controversial as to who should be responsible for the implementation of sustainable practices. For example, without government regulations, businesses selectively choose which sustainable practices they will implement (Miller & Twining-Ward, 2005). While some organizations are choosing to implement voluntary sustainable practices and certifications, there are no baseline standards set for MICE and convention centers. For the industry to move forward with their sustainability goals, governments must buy-in to the concepts of sustainability and create policies that force the industry to move forward (Weaver, 2006). Another view places the onus on governments to support the practices already implemented, in so encouraging more organizations to make more sustainable

choices. However, as previously mentioned, this is a complex interwoven topic with various benefits and drawbacks (Bendell & Kearins, 2005). Regardless of how one defines the institution of sustainability, ethics, governance, or the institutional/ social capital outlook, the details of these terms are all interconnected and vitally important to understanding sustainability.

Interactions Between the Components of Sustainability

While each of the above descriptions focused on the individual components of sustainability, how these components interact is not always straightforward. For example, communities rely on natural resources for their economic, and physical well-being (logging for housing or firewood, water for drinking and cleaning, mining for metals and stones, clear-cutting for farming). At the same time, the use of those resources is an ethical dilemma and many times relates to government policies, therefore making the communities, natural resources, and economics dependent on the institution (Swarbrooke, 1999; Teriman, Yigitcanlar, & Mayere, 2009; Wight, 2007). The conclusion from this example is that the components of sustainability make up a complex system of inter-related, interconnected components.

Valentin and Spangenberg (2000) attempted to describe the interconnections between the four components of sustainability. First, equal rights to access natural areas are interlinked with the social and environmental components of sustainability, reflecting it was a "human right to resource access" (p. 384). Secondly, the relationship between the institutional and social aspects equate to democracy providing greater tolerance and community cohesion. They suggested participation in democracy as a minimum

stipulation for social solidarity and sustainable development. Third, varied wealth can lead to a social expense. For example, people making a greater income who work for factories that pollute and create waste are unlikely going to live in the part of the city affected by the poor air and water quality created by the factory. Therefore, there is a direct connection between the social and economic components. Fourth, the relationship between the institutional and environmental components may take form as legal policies, displaying organizations' and individuals' concerns for the natural world. For example, the U.S. government has put policies in place to protect national park land limiting use to conservation purposes. Valentin and Spangenberg's (2000) descriptions of the interconnections between components shows that the components of sustainability are all interconnected as part of a complex system that must adapt based on changes that may occur (e.g., wealth disparities, changes in government leadership, who has water rights during a drought, etc.).

Elkington (the founder of the 3BL concept) initially argued for individually measuring each of the three components of the 3BL (as cited in The Economist, 2009). However, other work has shown this is not practically possible. The difficulty comes with the tendency to ignore the relationships between the different "bottom lines" and with a focus on the dimension that may be easiest to measure and/or solve (Miller & Twining-Ward, 2005). In particular, as described earlier in this chapter, most research focusing on sustainability in both the industry and the academy has assessed the environmental and economic impacts, effectively ignoring the social and institutional components of sustainability (Park & Boo, 2010; Sox et al., 2013; Swarbrooke, 1999). For example, businesses may focus on making money and implementing environmental practices

without planning for the potential effects that those things have on the social well-being of employees, and policy-making. Therefore, identifying objectives and indicators for the four aspects of sustainability is not enough because they do not provide any information on the nature of the components nor the effects of the interconnections (Valentin & Spangenberg, 2000). Without an understanding of the relationships between the four interrelated dimensions of sustainability and convention centers, the industry will continue to miss a crucial component of sustainability, the system itself.

Benefits of Sustainable Practices

Organizations may have numerous motivations for implementing sustainable practices. Miller and Twining-Ward (2005) argued that sustainability is the moral responsibility of the tourism industry to promote, develop, implement, and manage sustainability. They added that despite sustainability being the right thing to do, moral obligations alone might not be enough to motivate some organizations. Instead, organizational motivation may stem from potential for cost savings, marketing opportunities, or other business cases for sustainability (Miller & Twining-Ward, 2005). Regardless of an organization's motivation for sustainability, there are many beneficial attributes to managing enterprises sustainably, some of which include: gaining respect of consumers, technological development, public relations benefits, cost savings, and improvement of market conditions (Miller & Twining-Ward, 2005). Sustainable practices have the potential for improving an organization's image to their employees and customers (Camus, Hikkerova, & Sahut, 2012). The use of sustainable practices in tourism is on the rise and as previously discussed, there is a need for implementation of

these practices (Weaver, 2006).

Challenges to the Implementation of Sustainability

On the other hand, there may be challenges associated with a business implementing sustainable practices. One of the primary arguments that business leaders use against publically acknowledging sustainable practices is the liability of publically becoming sustainable (Makower, 2009). Communication between corporations and stakeholders has expanded due to the plethora of 'counter information' available on the internet, yet this counter information can come at a cost (Brown & Fraser, 2008). When an organization divulges sensitive financial information realized through exploitation of natural resources, pollution, or ill-treatment of employees, it can lead to negative consequences such a lawsuits, decreased sales, employee boycotts or in some cases even community strikes (Tinker & Carter, 2002). For example, if a hotel were to begin to publicize on their website that they have developed a sustainability program, people who specialize in sustainability are more likely to scrutinize their claim to attaining sustainability. One example of possible scrutiny could be if an organization were to only describe their environmental policies and did not include their sustainable practices involving living wages and fair treatment of staff.

Ventriglia and Rios-Morales (2013) built upon the ideas above by listing some of the challenges in the implementation of sustainable practices within the hospitality and tourism industry (Table 2.3). They identified misunderstandings as to what sustainability ordinarily entails in tourism. They also discussed a preventative cycle model by explaining that the main challenge to the implementation of sustainability is the cost and

Table 2.3 Frequently Listed Challenges by Segment

Hospitality Segment: Frequently Listed Challenges
• Costs • Resistance to change, cultural mix, and total stakeholder buy-in • Lack of or limited technology • Training, communication, and education • Lack of benchmarks/ standards or consistency • Market demand or perception • Understanding of real benefits • Not seen as a priority • Finding partners who share your standards • Lack of government support
Other Industry Frequently Listed Challenges
• Total stakeholder buy-in • Qualifying/ quantifying the cost-benefit analysis or ROI periods of technological investments • Cost away from core activities, not a priority • Monitoring and consistency, benchmarks/ trusted measurements • Understanding options, confusion with choices of initiatives • Maintaining the momentum of initiatives • The education of staff and monitoring of staff to carry out the program consistently, a coherent • Lack of tax/ legal framework to enable the right decisions to also be the more profitable ones • It doesn't yet 'pay' to care

Note. "Frequently Listed Challenges by Segment," by B. Ventriglia and R. Rios-Morales, 2013, in I. Jenkins and R. Schroder (Eds.), *Sustainability in Tourism: A Multidisciplinary Approach*, pp. 103-122.

shortage of benchmarks. Furthermore, there is skepticism and a lack of motivation in the industry as to the benefits and values for sustainable practices. However, they provided three ways in which the industry can work to move forward. First, a simple, consistent, and relatable definition of sustainability is necessary. Second, there is a need for new programs to educate others as to the values and benefits of sustainability for both businesses and consumers, as many previous programs have not been sufficient. Third, there is a need for more stakeholder involvement within organizations, as the active support and cooperation of stakeholders will allow for more success in the implementation of sustainable practices.

Confusion of Terms

Another challenge that organizations face is the confusion in definition of terms. Joel Makower (2009) stated, "One of the big problems companies confront when they set out to devise, implement, and communicate their green [sustainability] strategy is that there is little agreement about what it means for a company to be seen as green [sustainable]" (p. 18). He later suggested that the media, consultants, conferences, websites, and blogs all depict a different picture of a responsible business. He ended by saying that, "…the definition [of a sustainable business] remains in the eye of the beholder" (p. 18). However, businesses may struggle because of the existing flexibility in the terms sustainable, green, responsible, etc. According to Underwriters Laboratories (2010), 95% of the consumer products claiming to be green failed at one or more of the seven baseline standards that they have created called the *Seven Sins of Greenwashing.* The issue of marketing and management in the tourism industry comes down to the

proliferation of greenwashing (misleading advertisements by an organization to present a sustainably responsible public image or product) (Honey, 2008; The International Ecotourism Society, 2009).

The words *green*, *eco*, *responsible*, and *sustainable* have become trendy terms in the tourism industry. Businesses are continually trying to use key terms that will encourage consumers to purchase their products as a marketing scheme. However, much of the time, organizations are either lying about an environmental claim or making statements that are irrelevant (Futerra Sustainability Communications, n.d.). Greenwashing exists in advertising, public relations, and packaging. Greenwashing can include people, organizations, and products (Futerra Sustainability Communications, n.d.). The proliferation of greenwashing in the field of tourism has become a major problem (Ayala, 1995b). Many organizations make grossly exaggerated claims of their green practices, when in reality the claims are false.

Studies have increasingly shown that greenwashing is on the rise (Bowen, 2014) and various global regulators are trying to take action against erroneous marketing schemes. Greenwashing adds to increased consumer confusion. Though many consumers rely on advertising to help them make purchasing decisions, studies show that confidence in advertising is at an all-time low (Futerra Sustainability Communications, n.d.). In fact, only 10 % of consumers trust sustainability information from businesses and government organizations (Futerra Sustainability Communications, n.d.). “Without confidence in the claims, consumers are reluctant to exercise the power of their green purchasing, as they no longer know who or what to believe” (Futerra Sustainability Communications, n.d., p. 1). This phenomenon can impede consumers from choosing sustainable products and can

discourage organizations from using sustainability practices because of limited consumer demand (Futerra Sustainability Communications, n.d.). One way that tourism organizations have been combating greenwashing is through certifications and ecolabels (Underwriters Laboratories, 2010). By becoming certified, organizations can ideally sell themselves as sustainable by utilizing standards to prove the legitimacy of their practices to consumers (Futerra Sustainability Communications, n.d.; TerraChoice, 2009; Underwriters Laboratories, 2010). CMIGreen/ Community Marketing Inc. (2010) said, "Over 40% of respondents looked for third-party certification to verify that a travel supplier is truly "environmentally friendly" (p. 8) and 91.6% of respondents said that a hotel's environmental rating is an influence for decision-making. With more consumers looking for third-party verification to 'prove' sustainability, it is more important than ever for organizations to use certifications as a tool for standing out and combating greenwashing claims. Certifications also play the role of engaging employees in sustainable practices. The next section will cover employee perceptions of sustainability practices.

Employee Perceptions of Sustainability

Implementation of sustainable practices within organizations require employees to have positive perceptions towards activity and physical action (the act of doing the task) (Brammer, Millington, & Rayton, 2007; Cherian & Jacob, 2012; Collier & Esteban, 2007; Rupp, Ganapathi, Aguilera, & Williams, 2006). Employee perceptions refer to the thoughts or understanding pathways a person may have towards an individual or thing (such as a plan or policy) (Merriam-Webster, 2015). Perceptions focus on thoughts and

understandings of something, which may or may not incorporate support and participation in something. The concepts of employee perceptions towards sustainability are well-studied phenomenon in business, organizational behavior and human resource literature (Brammer, Millington, & Rayton, 2007; Cherian & Jacob, 2012; Collier & Esteban, 2007; Rupp, Ganapathi, Aguilera, & Williams, 2006).

Collier and Esteban (2007) wrote of three types of employee perceptions towards buy-in of sustainability programs. Buy-in is an individual supporting and participating in a something such as a plan or policy (Merriam-Webster, 2015). The first was the perceptions that employees have towards the organization and the degree to which the person identifies with the organization and commits the mission, vision, values, and goals of organization. These perceptions greatly influence a person's inclination to engage in sustainability programs. The second is the perception of fairness and justice or an organization's ethical behavior. If an individual perceives an organization to make ethical decisions, they may be more likely to participate in programs developed by that organization. The third type of perception mentioned was the importance of the "tone from the top" (p. 20) or the top management's support for sustainability through implanting principles and sustainability goals into decision-making, and the organizational culture and climate. They concluded that good human resource management efforts could play an important role in employee buy-in. However, organizational culture must support the recognition of employees as ethical agents, driven to do the right thing, as well as the most efficient choice for the organization. This supports the conclusions from a review of human resource literature that found that recruitment strategies, reward and appraisal programs, regular evaluations, training, and

empowerment all play an important role in organizations' successfully implementing sustainability goals (Cherian & Jacob, 2012).

Though many aspects of the business industry have recognized the importance of positive employee perceptions to successful implementation of sustainable practices in organizations, the tourism industry has put little focus on employee perceptions of social sustainability (Kim & Choi, 2013; Mackenzie & Peters, 2010; Mungai & Irungu, 2013; Hunt, 2011; Ustad, Liu, & Goodsir, 2010). One study that incorporated employee perceptions in tourism, focused on employee perceptions of environmental sustainability practices in hotels (Kim & Choi, 2013). The findings from the study showed that employees viewed the importance of sustainability within their hotel as higher than their hotel's actual sustainability performance (Kim & Choi, 2013). In addition, the study found a positive correlation between employees' organizational commitment and their perceptions of the hotels' sustainable practices. Another study researched perceptions of frontline hotel employees towards corporate social responsibility and how those perceptions influenced their level of organizational identification (Park & Levy, 2014). Their findings showed that employees not only identified with their hotel through environmental sustainability practices, but also through policies and practices relating to the community, other employees and customers (Park & Levy, 2014). They also found that employees' perceptions of sustainability positively and significantly impact the degree of organizational identification (Park & Levy, 2014). While some studies, such as the examples above, do deal with issues of employee perceptions in the broader field of tourism, there are currently no studies focusing on these topics with respect to sustainability within convention center literature. However, because convention centers

play a unique role in the tourism industry (i.e., there are no overnight stays, they offer event-specialized services, amount of square footage dedicated to exhibitions, not focused on leisure travelers, etc.), it is unlikely that the dynamics of employee perceptions will occur in the same ways as they do for the above research.

Sustainability as an Ethical Dilemma

One of the key components that Cherian and Jacob (2012) discussed as a way for employees perceptions to become more positive towards sustainability within an organization was the ethicality of an organization. A part of that ethicality is the decisions and policies implemented by an organization. Swarbrooke (1999) listed a spectrum of responses (Figure 2.3) that organizations may use to manage ethical dilemmas and challenges, stating that the implementation of sustainability is an ethical dilemma. He identified nine attributes, which are relevant to the application of sustainable practices within the tourism industry (Swarbrooke, 1999). The initial stage of his model consists of an organization denying a need for sustainable practices. Second, they can admit that there is a problem (i.e., climate change, consumption, waste), but take no responsibility for the issue. Third, the organization can admit that there is a problem but ignore the problem by instead emphasizing other positive business choices that they may be making so as to distract from the problem. The following stages of the spectrum incorporate other stakeholders outside of an organization itself as each play important roles in providing motivation, education, policy, buy-in, and various other benefits. These stakeholders include the government, employees at the various levels of an organizational hierarchy, the community, and tourists. The model shows that organizations may have various

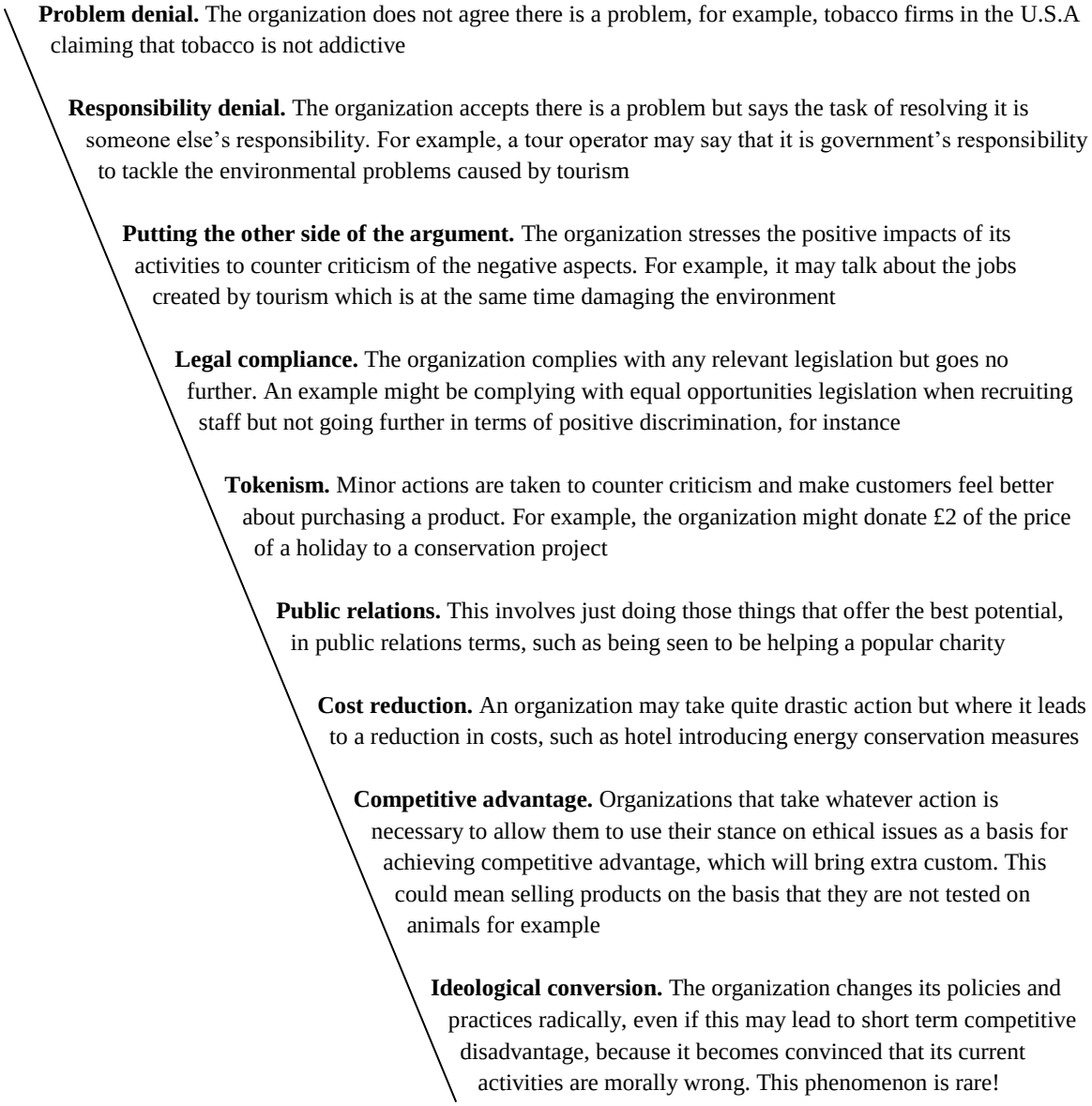


Figure 2.3. Spectrum of organizational responses. Adapted from "Organizational Responses to Ethical Dilemmas and Challenges" by J. Swarbrooke, 1999, *Sustainable Tourism Management,* p. 352. Copyright 1999 by CABI.

motivations to become sustainable such as government regulations, implementation of practices to please their clients, to improve public relations, cost savings, gain a competitive edge, or to use sustainable practices because 'it's the right thing to do.' The model provides understandings of the ways in which an organization makes choices to market, implement, and develop strategies to implement sustainability.

Convention Centers and Community Development

Much of the literature on convention centers has focused on the economic benefits that convention center development can offer communities (Yoo & Weber, 2005). In fact, of the 40 largest convention centers in the United States, 16 of them currently have growth projects planned or under construction (Tormohlen, 2014). Physical and environmental urban regeneration from the growth and expansion of convention centers in the United States has played an important role in the regeneration of cities. Hotels, food and beverage establishments, catering companies, retailers, entertainment, and sporting facilities are making improvements (Kock et al., 2008).

Local communities, destinations, and convention center development are all integrally connected. Many argue that convention center tourism offers economic benefits to local economies and private industries (Kock et al., 2008). In fact, a substantial number of the tourists who visit a destination for a conference or convention might not have otherwise visited that destination (World Tourism Organization, 2014). Convention center tourists typically visit a destination during the nonpeak seasons, which helps to support the expansion and upkeep of city infrastructure for tourism, including hotels and attractions (World Tourism Organization, 2014). Furthermore, convention

center tourists spend more money than an average tourist when staying at a destination, due to their corporate or professional stipends (World Tourism Organization, 2014). Larger stipends lead delegates to book more expensive hotels, pay for higher costing meals, and indulge on transportation fares like taking taxis versus public transit (World Tourism Organization, 2014). In addition to delegates, there are the event organizers, who are purchasing supplies and buying provisions; and exhibitors who spend high amounts of money to court possible clients through products and services (World Tourism Organization, 2014). Destinations frequently support convention center development because of the tourism money collected through event planning, hotels, transportation and other direct, indirect, and induced spending to convention centers.

Convention Center Impacts

There are various pros and cons for convention center development within destinations. Convention centers drive tourism to destinations, and they offer educational opportunities, an improved public destination image, and create jobs. However, convention centers also have challenges: They many times lose money, they are dependent on large events and develop to meet the needs of those events, and some researchers argue that the benefits of convention centers have been overly positive in the literature. The following section will discuss the benefits and drawbacks of convention centers in the literature.

Economic Impacts of Convention Centers

Much of the literature on convention centers has focused on the economic benefits of convention centers and has argued for further growth and development of these centers for the continued success of destinations. Kim, Chon, and Chung (2003) argued that convention centers and the MICE industry have five primary types of economic impacts. First, a large number of participants attend conventions. Second, conference attendees many times stay at a destination for a longer period of time than leisure travelers. Third, conference attendees spend a high volume of money. Fourth, many conference delegates will partake in pre- and post convention events. Fifth, both conferences and exhibitions positively influence a number of different industries (Kim, Chon, & Chung, 2003). However, despite the many economic benefits, this subject is complex to assess, due to the destination systems' reliance on the event industry, the vast impacts that the industry has on local business. One reason for this complexity is that many times convention centers lose money in their operational costs, though in theory, the destination makes up for the loss through other means (social, political, economic, and environmental) (Isler, 2008; Nelson, 1999). These can come from various channels such as direct financial spending from attendees, exhibitors; the business professionals who visit a city have the potential to bring trade and investments to a destination (Nelson, 1999). In addition, events offer education, networking, local skill development, and the potential for local employment (Kock et al., 2008; World Tourism Organization, 2014). Convention centers and partnering organizations such as hotels, restaurants, bars, stores, entertainment, and others create local jobs (Nelson, 1999).

Another argument for convention center development comes from an increased

public image of redeveloping an area within a city. “When a location has a convention center, the city gains additional publicity and can consciously try to remold its image by replacing the perception of the city as a place of disinvestment, deterioration, crime and poverty” (Kock et al., 2008, p. 313). Fenich (1992) discussed examples of cities using redevelopment for distressed areas of a city as a way to revitalize an area. Niagara Falls, New York improved a blighted area of the central business district by building a convention center. New York City developed the Jacob Javits Convention Center in “Hell’s Kitchen,” an area to help with the image of the area (Fenich, 1992). New Orleans also built a convention center on an abandoned dock-front as a way to bring more tourism to the area (Fenich, 1992). He argued that the examples included direct benefits from convention center development including significant spending, employment opportunities, an enhanced urban image, and redevelopment of depressed city areas (Fenich, 1992). In addition, there are indirect benefits of convention center development such as the multiplier effect where convention attendees spend money on lodging, restaurants, drinks, transportation, retailers, etc., leading to employees, suppliers and government workers then also spending money locally (Fenich, 1992). Another indirect benefit of convention center development is additional local development such as hotels and restaurants near the convention center (Fenich, 1992). When the Jacob Javits Convention Center was built in New York City, the city reported at least 20 projects that were planned around the convention center (Fenich, 1992). Providence, Rhode Island conceptualized a multibillion dollar downtown renewal project called the Capital Center after the development of their convention center (Fenich, 1992). Though even with the direct and indirect benefits of convention center development, there are also challenges.

Despite the argued benefits of convention center development, some researchers have offered different points of view. Economic analysis of convention centers has tended to be overly positive, not necessarily offering an accurate picture of the economic truth that many convention centers lose money in their operations (Boo & Kim, 2010; Nelson, 1999). In addition, expansion of exhibiting facilities may or may not generate additional revenue through attendance and hotel room nights (Isler, 2008). While the 2001 San Diego Convention Center expansion generated additional revenue, results from a study of the San Antonio Henry B. Gonzalez Convention Center expansion in 2001 found that the hotel room nights sold after the expansion did not increase on a consistent level (Isler, 2008). Challenges regarding convention center development include difficulties in accurately measuring the degree to which convention centers make an impact (Lee, 2006). Many convention centers are highly reliant on a large annual event and argue that their center must continue to grow with their events (Isler, 2008). One example of a convention center dependent on a single event is the San Diego Convention Center's many expansions to meet the needs of the ever-growing Comic-Con (Halverstadt, 2015). At present, a framework for measuring the complexity of convention center impact on a destination does not exist (Lee, 2006). While many researchers have discussed the economic impacts of convention tourism to a local community, it is difficult to measure as the majority of the external economic impacts come from local small businesses (Lee, 2006). This leads to challenges for destinations and researchers to understand overall economic magnitude of the industry (Lee, 2006). Much of the literature on convention centers has focused on the economic benefits, skirting around the other aspects of sustainable development. Though conventions and convention centers are moving

forward and have begun to implement sustainable practices, sustainability specific to conventions and convention centers is a fairly new area of research literature (Sox et al., 2013).

Environmental Impacts of Convention Centers

While there are a number of positive aspects of the meeting and event industry, the U.S. Environmental Protection Agency (EPA) found that after building and construction, the meeting and event industry is the second most wasteful industry in the United States (as stated by International Tourism Partnership, 2011). Meeting Strategies Worldwide, now called MeetGreen (2008), reported that the average conference attendee at a 3-day event produced nearly 28kg (61 lbs.) of waste, in contrast to the 6kg (13.5 lbs.) that they would accumulate at home during the same period of time. In addition, that same attendee would create 640kg (1,142 lbs.) of greenhouse gas emissions through travel (flight, driving, emissions from the venue and accommodations), which is the same that the average person would emit in 1 month of driving a car at home. If one were to multiply these impacts by the 225 million participants attending meetings in the United States annually, the numbers increase to 13,725,000,000 lbs. of waste. The example above describes the environmental impacts of a single conference, yet as U.S. convention centers host hundreds of events a year, it is important to assess sustainability within convention centers.

Social Impacts of Convention Centers

Many sectors of tourism also consider the social/ cultural component of sustainability is equally important when planning and implementing sustainability practices (Bricker, Black, & Cottrell, 2013); this is not the case for the convention center industry. As previously mentioned, social sustainability can take the form of stakeholder engagement, including employees, event managers, exhibitors, attendees, vendors, partners, the local community, convention and visitor's bureaus (CVBs), government, and others. However, neither the sustainability certifications offered, the most commonly adopted sustainability practices in the convention center industry (GMIC, n.d.; ISO, n.d.-a; U.S. Green Building Council, 2015), nor the literature regarding sustainability in the convention centers discusses the social components of sustainability very much. The existing convention center research has focused on clients (event planners, exhibitors, and attendees), the local community, and management, while ignoring employees outside of upper management. However, this component, while many times overlooked, is paramount to the success of a convention center's ability to function and execute the use of sustainable practices (Simon & Unterkofler, 2015).

Employees play roles in both the implementation of sustainable practices, and a fundamental part of the system of sustainability itself within a convention center. Research has shown that if employees are happy and feel appreciated, they are more productive, and innovative (Makower, 1994). On the other hand, a Sustainability Program Manager at a U.S. convention center said that employee buy-in is the most challenging issue regarding the implementation of sustainability practices that they have had to face (Female Convention Center Sustainability Manager, October 21, 2014). This

was also supported by Simons and Unterlofler (2015) who said that, “although challenges with keeping staff engaged in sustainability programs were commonly reported, centers are coming up with creative ways to help employees better understand why sustainability is important and reward their improvement” (Simons & Unterkofler, 2015, p. 11). While it has not been researched in convention centers, studies in other fields of business and tourism have shown that if employees do not have positive perceptions of sustainability policies and do not buy-in to the implementation of those practices, it is difficult for an organization to meet their sustainability goals (Collier & Esteban, 2007; Kim & Choi, 2013). Additionally, employees who buy-in to sustainability programs are more likely to have stronger organizational identification (Park & Levy, 2013). Therefore, it is paramount for convention centers to acknowledge how employee perceptions towards sustainability practices play a role in the implementation of sustainability policies.

Sustainability and the Convention Industry

Sustainability plays an important role in convention center development and management. The following section will discuss sustainability as it relates to convention centers and will then discuss how one could better understand sustainability within convention centers through arguing for the use of Complex Adaptive Systems (CAS) theory. A number of recent articles have acknowledged the need to discuss the topic of sustainability in the industry, yet have focused their efforts on the economic and environmental bottom line, scarcely touching on the socio-cultural, and policy aspects of sustainability within a convention center (Draper, Dawson, & Casey, 2011; Park & Boo, 2010; Sox et al., 2013; Tinnish & Mehta Mangal, 2012).

While much of the literature has discussed the need for sustainability in the event industry, the industry research has primarily concentrated on individual events and conferences themselves, instead of event venues and convention centers (Convention Industry Council, 2004; Deale, 2013; Presbury & Edwards, 2005; Rogers, 2013). The majority of the academic literature on convention centers and venues has focused on the economics of convention center development, overlooking the environmental, social, and institutional attributes of convention centers (Brezina, 1999; Crouch & Brent Ritchie, 2008; Fenich, 1992; Nelson, 1999).

Sustainable practices have the potential for cost savings, conservation of natural resources, protection of wealth, decreased greenhouse gas emissions, and pollution, reduced water consumption, increased reuse and recycling programs, improved reputations of a destination, and an overall increase in profits (Davidson & Rogers, 2006). Turtle (2008) argued similar points by discussing the business case for sustainable practices in the meeting industry, mentioning three myths regarding the implementation of sustainability in meetings. First, events are complex. Second, sustainable practices are expensive. Third, the use of sustainable practices decreased the overall quality of an event. Lee, Brieter, and Choi (2011) studied the outlooks of conference attendees on the quality of a destination and sustainable practices in conventions. They added to the previous points by saying that sustainability in events can help a destination maintain their ability to stay competitive. Their study also showed that sustainable practices are considered a ‘core competence’ of a destination, providing a competitive advantage for the future, noting that sustainability has become a prerequisite for successful events instead of simply an optional or ethical choice.

Park and Boo (2010) surveyed conference attendees, meeting planners, and suppliers in Washington, D.C. with a sample of 358 respondents. They found that recycling programs were the most commonly used sustainable practice by the respondents (57%). Second to recycling, about half of the conference attendees use public transportation for travel (52%). Yet, the most interesting finding of the study was that 27% of conference attendees had never experienced sustainability practices at an event. In addition, the majority of attendees had no knowledge of certifications. While 30% were aware of Energy Star, only 10-15% were aware of tourism-specific green certifications and less than 5% were aware of Green Globe (the only U.S. sustainable event certification in alignment with the GSTC criteria). Park and Boo's (2010) study also showed that meeting planners were the most knowledgeable of sustainability practices, but the least likely group to recognize cost-effectiveness from sustainable practices and they felt the least environmental responsibility of the three groups surveyed.

Draper, Dawson, and Casey (2011) studied the use of sustainable practices and the importance of sustainability when seeking a meeting or convention site. Their research showed that three items were important to meeting planners when choosing a destination: First, on-site recycling programs to capture separate organic waste for composting; Second, donating food to a local shelter; Third, a venue was applying for or actively pursuing a LEED certification. The study also showed that despite interest in LEED certifications, many convention centers might not have the funds to pay for sustainability certifications. They instead recommended convention centers implement the practices that are reasonable within their budget. The research also showed that younger certified meeting planners were more likely to have an awareness and concern

for environmental issues while the older generations made greater efforts to recycle. Finally, their research argued for a more holistic outlook and understanding of sustainability research in convention centers.

Sox, Benjamin, Carpenter, and Strick (2013) studied the importance of sustainable practices in convention centers among meeting planners and attendees. They based their sustainability indicators on the APEX/ASTM Environmentally Sustainable Meeting Standards. Their findings showed that meeting planners (92%) were more willing to pay a higher rate for events at sustainability certified venues. On the other hand, attendees (93%) were willing to pay a higher rate if the staff at a convention center were educated about sustainable practices. They found these discoveries particularly interesting because of the lack of standardized sustainability certification in the industry.

Unterkofler and Simons (2014) published the first *Green Venue Report 2014: The State of Convention Center Sustainability* that studied sustainability in 16 U.S. and Canadian convention centers. The report detailed varying aspects of sustainability and provided case study examples of the best practices. While there were many conclusions that came out of the report, there were nine key findings. The majority of convention centers had a dedicated sustainability coordinator or sustainability manager. The second discovery was that the convention center staff are the most significant stakeholders, and additionally, 12 of the 16 centers have an employee green team averaging 14 team members. Yet, despite the need for staff buy-in, convention center staff and event managers are not discussing sustainability. In fact, 69% of the convention centers reported that less than 20% of event planners ask about sustainability during the planning process, discussing that many of the services offered have not been taken advantage of by

event organizers. The convention centers were adding emphasis for employee engagement through awards, sharing, education, town hall meetings, and circulation of annual sustainability reports. Many sites have shown their commitment to "green cleaning" by supporting on average 77% of their spending on third-party certified sustainable cleaning products. All of the centers were participating in some form of a waste diversion program and 100% of the centers utilized renewable energy. In fact, the use of alternative energy within convention centers is the highest among all of the different types of commercial buildings. Of the convention centers surveyed, 5 of the 16 used onsite solar arrays, and the rest used offsite renewable energy. The seventh takeaway was that "centers are aggressively seeking certifications" (p. 8): 94% of the convention centers surveyed were looking to adopt a sustainability certification, with 88% of the centers having previously obtained or planning to pursue a Leadership in Environmental and Energy Design (LEED) certification for buildings. The eighth finding was that calculating the impacts of individual events was a challenge for most centers. While 11 of the 16 convention centers had the capability to track waste for individual events, they rarely track the waste for events due to a lack of interest from event planners. Seven convention centers were able to assess and report energy consumption for each event. Their last results showed that convention centers are making a greater effort to promote their sustainable practices through websites (100%), brochures (88%), official sustainability policies (56%), and publishing those policies online (31%). Finally, what the report did not mention was the social components of sustainability. The report focused primarily on environmental and economic attributes of sustainability. While the results of the sustainability report had a small sample, the authors postulated that the

small sample size was likely due to the majority of convention centers not having a single, dedicated person who would be able to answer all of the survey questions (Unterkofler & Simons, 2014). Though the results of the sustainability report had a small sample, this report was the first of its kind and showed convention center dedication to improvement. Yet, the industry needs more research to understand the points mentioned in the report (Unterkofler & Simons, 2014).

Though there is little research regarding sustainability of convention centers, the U.S. convention center industry is currently pushing for the implementation of sustainable practices (Convention Industry Council, 2004; Green Meeting Industry Council, n.d.; International Association of Conference Centers, 2014; Unterkofler & Simons, 2014; World Tourism Organization, 2014). Research has pointed to a gap in the literature regarding how dimensions of sustainability interact in the convention center setting, especially overlooking social, and institutional sustainability (Draper, Dawson, & Casey, 2011; Lee, Breiter, & Choi, 2011; Sox et al., 2013; Tinnish & Mangal, 2012). Recent research has emphasized the significance of employee outlooks when planning and implementing sustainable practices (Unterkofler & Simons, 2014). In addition, it was discussed that convention centers are moving towards the use of certifications to showcase their practices. The next section will discuss the possible certifications for convention centers.

Sustainable Tourism Certification

One way that tourism organizations have worked to show their dedication and commitment to sustainability is through the use of sustainability certifications. Voluntary

sustainability certifications, particularly those emphasizing environmental components of sustainability, are becoming a more common practice in the convention industry. Convention centers utilize logos and names of certifications on their websites (e.g., 'site secured'), food packaging (e.g., certified organic), buildings (e.g., Leadership in Environment & Energy Design (LEED)), electronics (e.g., energy star certified) and many other products, and services. A certification is a process that evaluates, inspects, and provides a recorded guarantee that a venue, merchandise, procedure, or service achieves certain criteria (Honey & Rome, 2001). A certification can be conveyed vocally, written in words or have an emblematic illustration; it can be verbose and expressive or brief and concise, can be fixed on an item or changeable, valid or invalid, dependable or deceptive (Buckley, 2002). Many sustainability certification programs often incorporate voluntary codes of conduct or sustainable tourism criteria, environmentally conscious awards, or accreditations, and certification schemes (Buckley, 2002).

Certification and Convention Centers

Much of the tourism literature that calls for sustainability also discusses the need for certification (Ventriglia & Rios-Morales, 2013). If done well, certification programs may assist in combating greenwashing, and offer a marketing strategy providing consumers with a name to trust (Feinstein, 2013; Honey, 2002). Sustainable tourism certification can also give credit to organizations that are working to create positive change (Honey, 2002). Unfortunately, while some organizations are making efforts to become more sustainable, it is difficult for them to get recognition for their efforts. This is due, in part, to the existence of numerous different international and domestic

sustainability certifications, making it difficult for organizations to know which ones are legitimate (Honey & Stewart, 2002). However, while there have been a large number of sustainable tourism certifications, sustainability certifications are fairly new to the convention center industry (Golding, 2015).

In 2011, as a way of responding to the lack of certifications, the U.S. Environmental Protection Agency spearheaded a collaboration with the Green Meeting Industry Council (GMIC), the Convention Industry Council's Accepted Practices Exchange (APEX) and American Standards, Testing and Materials or ASTM International (ASTM) to develop the APEX/ASTM Environmentally Sustainable Meeting Standards (GMIC, n.d.). The APEX/ASTM Environmentally Sustainable Meeting Standards serve the purpose of offering environmental sustainability certifications for both MICE and convention centers. This certification offers a number of different standards including: 1. accommodations; 2. audio/ visual and production; 3. communication & marketing; 4. destinations; 5. exhibits; 6. food & beverage; 7. meeting venue; 8. on-site offices; 9. transportation. Tiffany Hoambrecker, associate director of convention services for Visit Denver, said that until recently, "there was no way for meeting planners to compare self-proclaimed sustainable destinations on an even playing field" (Golding, 2015, ¶ 6). While convention centers are beginning to adopt the APEX/ASTM standards, it is still not common practice, as there are only 6 certified convention centers of the 40 largest convention centers in the United States (see section below on the certifications being used by U.S. convention centers).

There are many arguments in favor of sustainability certifications (Ventriglia & Rios-Morales, 2013). Some of the benefits and incentives for becoming certified include:

improved customer satisfaction, direct, indirect and insurance cost reductions, reduced liability, increased income, enriched management practices, enhanced public image, conservation of resources, upgraded technology, encouragement of partnerships, and organizations can become more competitive (Toth, 2002). Certification allows organizations to market themselves apart from others, the potential of improving quality of life, and providing cost-savings (Honey & Stewart, 2002).

Michigan's largest convention center, the Cobo Center, viewed certifications as a way of not only helping the convention center to stand out and prove their commitment to sustainability but also as a way of showcasing the city of Detroit. Thom Connors, regional vice president and the previous general manager of the Cobo [Convention] Center in Detroit said,

> Achieving certification to the industry's global standard is clear proof of the Cobo Center's commitment to sustainability… we are proud to take the lead in advancing the city's responsible environmental and social practices in the meetings industry and hope this will encourage others in making Detroit a more sustainable meeting destination. (Pfalzgrae, 2015, p. 3)
> `

The Cobo Center has used certifications as a way of marketing the revival of Detroit and encouraging meeting planners to choose Detroit for their meetings.

Convention centers have reported other benefits for acquiring sustainability certifications. Convention centers who use Leadership in Energy and Environmental Design (LEED) to certify their buildings have reported better indoor air quality, increased recruitment, productivity and retention rates and a 19.2% average increased return on investment on existing green projects, and 9.9% average for new projects (U.S. Green Building Council, 2015). Another respected certification in the convention center industry is the International Organization for Standardization (ISO), which has published

over 19,500 international standards in a variety of industries focusing on: technology, food, water, health, sustainable development, accessibility, climate change, energy efficiency and renewable energy, and others (ISO, n.d.-a). Becoming certified through ISO standards can bring cost savings through optimized operations, increased client contentment, access to new markets, growth in sales, increased productivity, competitive gains, and a reduction of negative environmental impacts (ISO, n.d.-b). To further explain the depth of varying certification programs, the following section will detail the various levels of certifications ranging from self-assessment to third-party audits.

Levels of Certification

There are various levels of certifications fulfilling different purposes. Some organizations have multiple sustainability certifications. For example, the most commonly implemented standards in the U.S. convention center industry are LEED building standards, APEX/ASTM Environmentally Sustainable Meeting Standards, and ISO Standards. Many of the convention centers that are APEX/ ASTM certified also have a LEED certification as they measure different things. Each of these certification options has different costs incurred through the implementation of the audit process.

Early certification programs in tourism were often first-party certifications that asked an organization to complete a written questionnaire about their sustainable practices (Honey & Rome, 2001). The synonym for first-party certification is self-evaluation where an organization affirms conformance with a certain standard (Bien, n.d.; Toth, 2002). Organizations use first-party certifications to set standards or criteria using in-house assessment. Therefore, in first-party certifications there is no one from the

outside verifying a set of criteria. For those who want to combat the concerns related to possible lies or exaggerations that an organization may include on their self-assessment, many programs provide an option for on-site audits by independent third parties (Honey & Rome, 2001).

A second-party certification relates to products or services offered by a purchaser who declare that their product or service meets the purchaser's standards prior to entering into a transaction (Bien, n.d.; Toth, 2002). The quality of these evaluations differs greatly and they may include delegation of these evaluations to buyers from a trade association or a commercial inspection service (Toth, 2002). Some trade associations require their members to become second-party certified by a contracted freelance auditor or the association's auditors (Toth, 2002).

While there are many ways for businesses to become certified, the most recognized for legitimacy is the inclusion of third-party certification or the utilization of unbiased, independent organization who assesses the fulfillment of a product or service with distinct standards that is not the buyer or seller of the standards (Bien, n.d.; Rainforest Alliance, 2009; Toth, 2002). Third-party certification can be obligatory or voluntary as some government agencies or consumers require third-party assessments (Toth, 2002). Bien (n.d.) defined a third-party certification as, "a neutral, independent organization that evaluates the compliance of the product with clearly defined standards" (p. 14). According to Bricker, Chair of the TIES board of directors (personal communication, October 14, 2009), third-party certifications are still the most reliable way for organizations to prove that their efforts are legitimate and not simply greenwashing. Generally, while the tourism industry is in the process of working towards

a more sustainable industry, and sustainability indicators and certifications are being developed, there is still an under-utilization of such resources in the industry (Miller, 2001; Warnken, Bradley, & Guilding, 2003).

The fourth type of certification system is called a supplier's audit confirmation, which includes aspects from both the first- and the third-party certification (Toth, 2002). First, an organization develops an internal audit program; once the program has matured, they hire a third party to assess the effectiveness of the program (Toth, 2002). This third-party assessment puts an emphasis on internal auditing and possible corrective action instead of a supplier's entire operation. The goal is to increase the credibility of the first-party assessment (Toth, 2000).

Implementation of Certification Programs

The process of certification includes many interrelated activities of which a product, service, organization or individual is evaluated for compliance with a standard. Toth (2000) referred to this process as "conformity assessment" (Figure 2.4). Each step in the figure plays an important role in the acceptance of new standards; however, the fourth step labeled as "accreditation" is essential because not all certification programs contain the same standards and not all certifiers are have the same knowledge base or abilities.

One criticism of first-party certification programs is that there is no outside auditor to assess compliance with a set of standards. However, many times there are no regulations for third-party certifiers as to the quality and legitimacy of their programs. The standards used by accredited certifiers must meet a baseline level of performance. Because of this, accredited certifiers typically maintain greater consistency in their

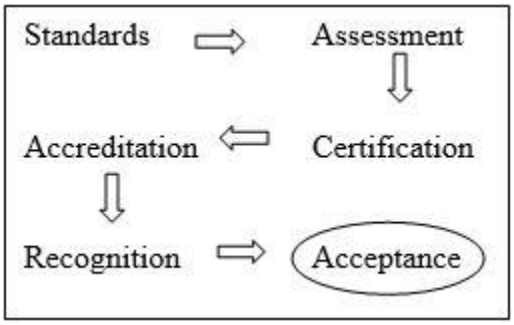


Figure 2.4. “Essential components of conformity assessment systems.” Reprinted with permission from R. B. Toth, 2000, Implementing a Worldwide Sustainable Tourism Certification System, p. 7. Copyright 2000 by Latin American Center for Competitiveness and Sustainable Development.

services and uniformity in their results (Toth, 2000). Credibility and reputations of certification or accreditation bodies can help widespread acceptance of certifications or accreditations in the marketplace (Toth, 2000). Many times, nongovernmental organizations (NGO) or government bodies will "endorse" or officially recognize the competency of an accreditation or certification program as related to the NGOs or government body's established objectives (Toth, 2000).

The sixth and final step listed in the figure is that of acceptance. This step includes the approval of a certification program by all affected parties. The acceptance stage is when consumers and producers are convinced of the benefits received by the certification, in addition to believing in the credibility of the standard and the steps required throughout the certification process (Toth, 2000).

Indicators

Indicators are the biophysical, socio-cultural, managerial, or other settings that individuals find important for a certain circumstances (Miller, 2001). Sustainable tourism certifications use indicators as ways of assessing their standards. Indicators have the potential to be catalysts for change and can create an early warning system for organizations and decision makers to facilitate policy changes and remedial measures. One of the primary challenges with these indicators is that they are complex in nature; indicators have much crossover while maintaining intricate processes and must be developed and understood by various stakeholders (The Macaulay Institute, 2006). The Macaulay Institute (2006) also argued that while there is a plethora of frameworks and approaches to selecting indicators and there are no shortage of indicators, there is a gap in

the literature regarding the actual application of sustainable tourism indicators. Rutherford (1997) looked at sustainability indicators from a systems perspective, asserting that one of the primary challenges in indicator development is that the indicators must hold true for in both a macrosystems level and microlevel. Relevant to this argument is Miller and Twining-Ward's (2005) point that systems are both unique and complex, which is why the use of multiple methods may be the best way to move forward. Many times organizational collaborations develop sustainability certification indicators. "Offer[ing] an important mechanism for creating and enhancing local partnerships and networks, ensuring the long-term sustainability of a program" (Bricker, Black, & Cottrell, 2013, p. 278). The following section will provide further details as to some of the challenges associated with sustainability indicators.

Unbalanced Power Relations

The use of sustainability indicators through certifications has the potential for increasing unbalanced power relations between individuals (Brown & Fraser, 2008). Baum (1977) argued that the reason for inequality in power relations is that true open discourse can only exist amongst equals; however, most organizations are set up with a hierarchical power structure. An example of this concept is a manager and employee. Some managers will remain open to listening as long as they maintain their power; however, once they feel susceptible to weakness they will stop listening and become more authoritative. An employee on the other hand can only speak freely as long as they prevent the possibility for negative repercussions (such as probation or job loss). Therefore, employees may not express their true feelings to managers for fear of negative

consequences. While organizations may publish sustainability reports that many times praise open communication between people of varying statuses, these reports have the potential to be misleading. For example, the people with power (i.e., the managers) many times want to sway those without power (i.e., the employees) that peace and common values are feasible within an organizational community without requiring a change within the current power structure (Baum, 1977; Brown & Fraser, 2008). The point argues that the majority of managers do not really want to encourage change because they do not want to give up continued or potential power. Despite this argument against sustainability reporting, it is not necessarily a reason that one should argue against the use of sustainability reporting. It is just a factor to be aware of when publically acknowledging sustainable practices.

Accreditation

One way that the tourism industry has worked to overcome greenwashing and to develop consistency among sustainability certifications, was by creating baseline standards for tourism certification programs. The Global Sustainable Tourism Council (GSTC) formed to address this effort. Established in 2010, the primary goal of the GSTC was to certify the certifier or to accredit certification programs on the inclusion of baseline sustainability criteria. “The GSTC Accreditation Panel seeks to recognize standards and certification programs that are credible, transparent, impartial, and comply with the GSTC Criteria for sustainable tourism” (Global Sustainable Tourism Council, 2014). The GSTC has not yet developed accreditations or baseline standards for the MICE industry. Nor have U.S. event industry certification programs been accredited by

the GSTC. Additionally, there are currently no accreditation bodies specifically for convention centers in the United States.

Certified Convention Centers

The Convention Industry Council (2010) argued that by implementing a sustainability certification, convention centers could save time and costs, distribute data and publically acknowledge their commitment to sustainable practices, help to make systems and processes more efficient, develop expertise in the field, and acquire noteworthy results. To better understand the sustainability certifications within convention centers, I took the list developed by Jensen and Anderson (2013) of the 40 largest convention centers in the United States, containing a minimum of 350,000 square feet of exhibit space, and identified the various certifications programs being used by the convention centers via the internet. I wanted to gain a clearer understanding about the use of certifications by the largest centers in the United States, tier I and II centers. Table 2.4 assessed how many centers were using certifications and sustainability certifications used. The table includes the results of U.S. tier I and II convention centers with certifications and a more complete list is included in Appendix I. For a more detailed background on each certification mentioned below, see Appendix II. LEED certifications were the most frequent certifications across U.S. Tier I and II convention centers, with 14 out of the 40 maintaining current LEED building certifications and an additional three more in the midst of getting LEED certified at this time. Six of the 40 convention centers have at least one level of the APEX/ASTM Environmentally Sustainable Event Standards. Three of the convention centers have a form of the International Organization

Table 2.4 Sustainability Certified Tier I and II U.S. Convention Centers

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications
1	McCormick Place (Chicago, IL)	2,600,000	APEX/ASTM, LEED (West building is the largest new construction facility to be certified in the United States)
2	Orange County Convention Center (Orlando, FL)	2,100,000	APEX/ASTM, ISO, LEED Gold for Existing Buildings: Operations and Maintenance
4	Georgia World Congress Center (Atlanta, GA)	1,400,000	LEED Silver for Existing Buildings: Operations and Maintenance (2009) (World's largest LEED certified convention center)
5	Sands Expo & Convention Center/ Venetian | The Palazzo Resort Hotel Casino (Las, Vegas, NV)	1,305,052	2nd Level APEX/ASTM, Global Reporting Initiative (GRI), LEED Gold for Existing Buildings (Sands Expo and Venetian), LEED Silver for new construction (the Palazzo), TripAdvisor GreenLeader Gold Certification (The Venetian and the Palazzo)
10	Kay Bailey Hutchinson Convention Center, formerly Dallas Convention Center (Dallas, TX)	1,018,942	LEED Silver, ISO 14001
11	Mandalay Bay Resort & Casino (Las Vegas, NV)	934,731	Green Key Eco-Rating Program (5 Keys)
15	Anaheim Convention Center (Anaheim, CA)	813,000	LEED Existing Buildings: Operations and Maintenance (2009), **Working on next level now
16	Indiana Convention Center & Lucas Oil Stadium (Indianapolis, IN)	749,100	**Plans for LEED with next expansion
17	Cobo Center (Detroit, MI)	722,500	Green Venues Michigan Certification, Level 1 APEX/ASTM

Table 2.4 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications
18	Los Angeles Convention Center (Los Angeles, CA)	720,000	LEED Gold Existing Buildings: Operations and Maintenance (2008), AEG 1EARTH (manages event venues and incorporates sustainability)
21	Phoenix Convention Center (Phoenix, AZ)	645,000	LEED Silver (West Building) (North building incorporates LEED standards but is not certified), IACC Green Star Sustainability Certified
22	San Diego Convention Center (San Diego, CA)	615,701	Currently LEED Silver Existing Building: Operations and Maintenance (2011), **Phase III of the next expansion will include a LEED Gold certified area
23	Colorado Convention Center (Denver, Co)	584,000	LEED Gold Existing Buildings: Operations and Maintenance (2014), Level 2 APEX/ASTM, ISO 14001 (Environmental Management System)(2009)
25	Calvin L. Rampton Salt Palace Convention Center (Salt Lake City, UT)	515,000	LEED Silver (2006)
31	Minneapolis Convention Center (Minneapolis, MN)	475,000	Level 1 APEX/ASTM
32	Moscone Center (San Francisco, CA)	442,000	LEED Gold for Existing Buildings: Operations and Maintenance
33	Henry B. Gonzalez Convention Center (San Antonio, TX)	440,000	**Future plans for LEED, none currently
34	Greater Columbus Convention Center (Columbus, OH)	410,000	**Becoming LEED certified now

Table 2.4 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications
36	Kansas City Convention Center & Entertainment Facilities (Kansas City, MO)	388,800	LEED Silver (Grand Ballroom)
39	Music City Center (Nashville, TN)	350,000	LEED Gold for New Construction, TN Green Star Partnership & Mayor's Workplace Challenge: Green (Gold) & Healthy (Silver) 2015

for Standardization (ISO) certification and six convention centers have another six varied certifications including: Global Reporting Initiative (GRI), TripAdvisor GreenLeader Gold Certification, Green Key, Green Venues Michigan Certification, AEG 1EARTH, IACC Green Star Sustainability Certified. Of the 40 total convention centers containing a minimum of 350,000 square feet of exhibit space, 19 of them have no form of sustainability certification. For the purpose of this study, the sample was limited to one of the 21 convention centers containing at least one form of sustainability certification. For a sustainability certification to be holistic and comprehensive, the indicators must assess sustainability as a system of interconnected parts (Font & Buckley, 2001; Miller & Twining-Ward, 2005). In the same vein, for MICE and convention centers to become sustainable, it is important to consider the interlinked facets of environmental, social, economic, and institutional sustainability. The next section discusses the historical significance of systems and describes complex adaptive systems. The section includes the use of Complex Adaptive Systems theory to help understand sustainability in convention centers.

A Systems Theory Approach

Background on Systems Theory

Systems theory was first developed by a biologist named Ludwig Von Bertalanffy in the 1940s (Haines, 2000). Since that time, other disciplines have embraced systems thinking worldview as a way of understanding the world including urban planning, biology, engineering, and management, among others. One of the benefits touted by researchers is that Systems theory allows for both a framework of theory while also

allowing for flexibility and adaptability as each system is unique to itself. The systems of tourism first appeared in a book by Gunn (1972) who drew the linkages between the supply and demand of the tourism system. Leiper (1979), later drew a figure outlining the structure of the tourism system from a geographical viewpoint. Leiper (1979) discussed the system of tourist movement from the individuals' home, their use of transportation and arrival to the tourist destination. Leiper (1979) was also the first to define tourism using a systems perspective:

> …the system involving the discretionary travel stay of persons away from their usual place of residence for one or more nights, excepting tours made for the primary purpose of earning remuneration from points en route. The elements of the system are tourists, generating regions, transit routes, destination regions, and a tourist industry. These five elements are arranged in spatial and functional connections. Having the characteristics of an open system, the organization of five elements operates within broader environments: physical, cultural, social, economic, political, technological with which it interacts. (pp. 403-404)

In his definition, Leiper (1979) not only defined the parameters of a tourist, but he also worked to encompass the various attributes of a tourism system such as destinations, transportation, geographic areas, and the tourists themselves. However, what the definition did not include was the possibility of business travel where travelers may not be traveling for discretionary purposes or participating in tours. As the purpose of defining the tourism industry is to look at the bigger picture, which should ideally incorporate all tourism systems, it is important to consider not only the tourism systems of leisure travel, but to also recognize that business and leisure travelers use many of the same tourism systems.

Soon after Leiper (1979) began using systems thinking as a lens to assess tourism, Butler (1980) developed the Destination Lifecycle Model, which recognized tourism as a system with various stages in its lifecycle. Murphy (1985) explored the tourism system

through a destination-focused approach and identified lifecycles within destinations, which were similar to those natural systems that occur as seasons. Building on the ideas of Butler (1980) and Murphy (1985), Holling (1986) wrote that that the systems of tourism destinations will ultimately move towards a constant, peak state. After Murphy's (1985) research, tourism Systems theory appeared to be focused on spatial factors, and not necessarily recognizing the multifaceted approach within Systems theory and the various layers, flows, and functions (Farrell & Twining-Ward, 2005).

The literature of the 1990s connected tourism destination systems to chaos, complexity, and change concepts (Faulkner & Russell, 1997; Laws, Faulkner, & Moscardo, 1998; Russell & Faulkner, 1999; McKercher, 1999). Russell and Faulkner (1999, 2004) reviewed Butler's (1980) Tourism Area Lifecycle Model and described how entrepreneurs overcame times of turbulence and chaos by applying creativity, which changed the course of destinations, and influenced competitive advantage. McKercher (1999) also argued that the nature of the tourism system is "chaotic, nonlinear, nondeterministic" (p. 425) and as a result, the existing tourism lifecycle models at the time failed to describe the connected relationships amongst the various components of the system (McKercher, 1999).

With the dawn of the new millennium, the literature on tourism and Systems theory increased. The focus moved in the direction of sustainability and sustainable tourism development. This may be because of the natural interrelationships and inter-dependencies between the environment, local community, economic well-being of an area, and governmental policies that lend themselves to a systems approach (Swarbrooke, 1999). Lim and Cooper (2009) connected sustainable development, tourism, and Systems

theory to small island tourism using a geographical approach. Bonetti, Petrillo, and Simoni (2006) developed a multilevel destination approach to sustainability and tourism systems. The conceptual model had four components. First, they worked to develop a conceptual model that assessed the territory of a tourism system where stakeholder relationships developed over time. Second, the model recognized that the various forms of tourism systems created value for particular market sectors. Third, the model acknowledged that an individual's perceptions of a destination were affected by tourist interactions. Fourth, the model worked to guide the evolutionary courses by dynamically connecting the different levels. Lu and Nepal (2009) argued that researchers in sustainable tourism were beginning to recognize tourism as dynamic complex systems. As such, the realization of more adaptive management approaches to sustainable management were necessary.

Bosch, Maani, and Smith (2007) discussed how issues can be better understood using the mechanism of Systems theory. The paper provided an overview of three examples of System theory tools that can help organizations to accomplish their sustainability goals. The end of the paper argued that there was a need for a paradigm shift towards the use of thinking in systems as systems allow for "sophisticated and unsophisticated modelling technologies, and associated collaborate learning environments" (Bosch, Maani, & Smith, 2007, p. 57).

Ropret, Jere Jakulin, and Likar (2014) used a system dynamics methodology to evaluate a development and policy plan for Slovenian tourism, concluding that a qualitative tourism development model connecting the research results to Systems theory was the next step forward. Peric and Djurkin (2013) addressed sustainability from a

community perspective by recognizing the characteristics of a model for community-based organizational structure, reasons for socially sustainable practices, and a case study focusing on a community-based tourism business. They determined that a community-based tourism enterprise could benefit from a systems approach especially regarding the theory and practice of sustainable development and socially responsible tourism.

Liu (2003) argued that for a "sustainable" tourism industry to move forward, a systems perspective was necessary. Liu said that "research on tourism resources should recognize its complex and dynamic nature and advance beyond the state of pleading for conservation and preservation to a realm of retaining a balance between the consumption, transformation and creation of tourism resources" (2003, p. 465). Stakeholders have the ability to make changes in the tourism system that impact the system functions and potential development (Lui, 2003).

Farrell and Twining-Ward (2005) linked Systems theory to tourism, and found that because the tourism system is ever changing and evolving, the ability to overcome disturbance and maintain resiliency should be the focus of tourism research. This approach somewhat dismisses ideas surrounding stability and/or optimization of a tourism system. Farrell and Twining-Ward (2005) developed seven 'steps' to help one understand systems thinking and the ways in which systems affect sustainable development research. The steps were not necessarily in any consecutive order, but were important recognizable components for those hoping to utilize the concepts of systems. The first step was to understand complex adaptive systems. The second step was to learn from natural ecosystems. The third step was a call for human and natural systems to find a sustainable way to co-evolve. The fourth step was to acknowledge tourism as a system.

The fifth step was integration with reference to: the previous steps mentioned above; human and natural ecosystems within scholarship; development of sustainability science, including social, technological, and biophysical science; and finally integration of information. The sixth step was to add postnormal or postlinear science. Finally, the seventh step was facilitating a sustainability transition or the continual development of human and biophysical well-being (Farrell & Twining-Ward, 2005).

What research has and continues to demonstrate is that a Systems theory approach is relevant to understanding sustainable tourism management. Whether it is a destination level assessment or individual tourism enterprises, the intangible nature and interconnected dynamics of the tourism industry require a sophisticated and complex methodology to address sustainable development, and management—and Systems theory can be a framework and theoretical basis to address this.

Overview of Systems Theory

Meadows (2008) defines a system as, "… a set of things—people, cells, molecules, or whatever—interconnected in such a way that they produce their own pattern of behavior over time" (p. 2). These 'things' could range from small interactions such as the collection of dust over time, to thoughts and actions of an individual, to larger interactions such as those within a group of individuals. Systems theory provides a unique perspective into the field of tourism due to its holistic approach to the complex interactions associated with tourism. The theory treats systems as multilevel and interconnected, which fits tourism very well. For example, these connected systems could range from a destination that contains organizations, the natural environment, policies,

governance, and the local community, to an independent organization with various departments, to an individual body comprised of the nervous system, skeletal system, etc. Relative to convention centers, systems thinking allows a researcher to assess the system from a micro- to macrolevel—such as a department and the role that it plays in the organization; or the convention center as a whole with interconnected relationships between staff members, outside organizations, visitors, and others. Furthermore, if a convention center is part of a larger chain or organization, it is also possible to look at the system of the convention center within the larger organizational system. The next section explores the complexity of the tourism system through the lens of Systems theory, providing a detailed background on Systems theory and its relevance to tourism.

Each system has at least one purpose. Most broadly, the purpose of a convention center is to house and service conventions, conferences, and/or exhibitors. However, contained within the convention center are various other systems, each with a specific role or purpose. The catering staff has the purpose of providing food for attendees, the marketing staff works to promote the convention center, and each individual employee completes unique tasks. Systems theory assumes that departments within an organization are inter-related. While much of the traditional literature in tourism has typically separated the various components of the tourism industry (Walker & Walker, 2010), Systems theory suggests instead, a researcher must assess a system as a whole to better understand the complexities of a phenomenon.

For the system to run successfully, the overall system purposes and the subpurposes must run in harmony (Meadows, 2008). Any organization would hope for this, but it is far from guaranteed, especially since the convention center system is quite

complex, with multiple levels of employees, patrons, partnerships, rooms, etc. Taking a systems approach requires the researcher to look at each individual or department as a smaller system within a larger organizational system, which allows them to understand how each individual or department as a whole works within the organizational structure and either helps or hinders the pertinent goals. This includes not only the role that each subsystem and variable plays in the functioning of the system, but also the intricacies of relationships between variables. For instance, a convention center marketing department depends on the well-being of the finance department and the overall success of the events held at the center to guarantee success of the departmental efforts.

The next section provides a further background on Systems theory and its use in the tourism industry, following up with the current literature on Systems theory as it relates to tourism and sustainable tourism literature. Finally, the section provides a description of Complex Adaptive Systems theory.

Integrating Systems Theory Into Tourism

There are numerous approaches to utilizing Systems theory in tourism. These have included various layers of the system itself, such as management, spatial relationships, markets, and geography. The approach or definition of the system explored ultimately delimits the results. Hence, the researcher provides the ultimate context based upon the problem.

Senge (1992) contended that there was a connection between Systems theory and management as the two had the potential to improve upon organizational learning and operations. Aronsson (1994) focused on tourism through the relationship between supply

and demand as it related to sustainable rural tourism systems in Sweden. Other researchers, Walker, Greiner, McDonald, and Lyne (1999), were more interested in the tourism destination and how Systems theory can help understand the complex relationships between the tourism industry, and the quadruple bottom line of the economy, the institution, the natural environment, and the local community. They argued that Systems theory allowed one to explain, simplify, and offer alternatives for mechanisms influencing the industry. To aid in this understanding, the researchers used two different areas in Australia as case study samples to help them develop the "Tourism Futures Simulator" (Walker et al., 1999, p. 59). The "Tourism Futures Simulator" was a framework for assessing the advantages and influences of nature-based tourism and the opportunities for policies that may help with the management of tourism and growth (Walker et al., 1999). While there have been a number of models developed to understand complex systems, none of the models have been adopted as common practice. To expand upon the intricacies of Systems theory, the following section will detail the theory of Complexity as it relates to tourism and the research on Complex Adaptive Systems.

Applications of Systems Theory to Sustainable Tourism

Many studies have contributed to deeper insights into sustainability through an assessment of tourism organizations using Systems theory (Miller & Twining-Ward, 2005; Testa & Sipe, 2006). As a result, more research and tourism textbooks are increasingly adopting a systems thinking lens and Systems theory approach to better understand the fields of tourism and sustainable tourism (Walker & Walker, 2010). This

appears to be a logical progression, as it is difficult to assess sustainability without looking at the interrelationships among the players or variables (Camus, Hikkerova, & Sahut, 2012; Gössling, 2009; Hall & Lew, 1998; Miller & Twining-Ward, 2005; Peric & Djurkin, 2013; Weaver, 2006).

Over the course of the last 15 years, numerous researchers have begun to try to operationalize Systems theory to better conceptualize the functionality of systems. The design of the Systems theory models sought to help understand human social interactions, or behaviors, events, or planning, and development. The previous models, most of which have not been applied to tourism, have applicability in the fields of tourism and sustainability.

Manni and Cavana (2007) developed two different behavioral system models for understanding human thinking. The first model provided the four levels of human interaction: events, patterns, systemic structures, and mental models. They argued that the tools of Systems theory focus on all levels of thinking. Their next model, known as the Causal Loop Diagram or language of Systems theory, offers insights to the causal relationships between a group of variables (labeled as factors) that impact the system.

Rocha, Searcy, and Karapetrovic (2007) developed an integrated management systems model to help understand prevailing management systems of "quality, environment, occupational health and safety, and corporate social responsibility" (p. 83) that have the potential to be more representative of sustainable development. The authors incorporated both a macrolevel standpoint stressing Systems theory for looking at the integrated management system and a microlevel outlook that incorporates the foundational seven elements of the model. The article argued that facets of sustainability

are not separate components and existing business infrastructure requires application of sustainable development practices.

While some research has identified the need to move beyond the exploratory when it comes to Systems theory and tourism and begin utilizing more experimental or quasi-experimental approaches (Lu & Nepal, 2009). Cabrera, Colosi, and Lobdell (2008) have argued that there is very little agreement amongst researchers as to the components of the tourism system. Even with increased research on sustainable tourism and Systems theory, researchers still acknowledge the lack of applied use of Systems theory in tourism, with this area of study still in its infancy (Farrell & Twining-Ward, 2005; Liu, 2003).

Operationalizing Systems theory as it relates to sustainable tourism can be challenging because there are no concrete set of principles due to the inherent uniqueness of each system. Miller and Twining-Ward (2005) identified stakeholder participation as a critical component of adaptive management strategies, "…for sustainable tourism to be place-based and promote the developmental needs of the destination with greater surety, tourism needs to be more stakeholder-driven" (p. 46). Other authors argue that there is still relatively little research seeking to operationalize complexity in tourism systems. Farsari, Butler, and Szivas (2010) argued that "…the emphasis nowadays should shift on how to operationalize the complexity inherent in tourism, and more particularly that in sustainable tourism policy, and develop methods and studies which can help understand this complexity" (p. 145). While complex adaptive systems studies in tourism are on the rise, Farsari, Butler, and Szivas (2010) contended that there is a greater need for the study of complexity within sustainable tourism, especially in regard to tourism policy.

Complex Adaptive Systems

As previously discussed, every system is unique. Some systems are more simplistic, linear, and predictable in nature; other systems are more complex, and nonlinear, such that minor changes can yield numerous, unpredictable results (Farsari, 2012). These results can sometimes be separate from the original circumstances or the activities that triggered the eventual outcomes (Farsari, 2012). Complexity refers to changeability or randomness within the web of connections affecting time, exchanges, participants, tools, and communities (i.e., organizations are usually comprised of a multihierarchy where each department could be a system unto itself; Jere Lazanski & Kljajić, 2006; Urry, 2005). An example of complexity is a maze with continuously changing walls, as a person walks through the system and interacts with the maze, the walls constantly adapt to each movement made (Urry, 2005). Complex systems are not additive; one cannot assess each individual component and assume that the combination of the parts will create a system (Miller & Twining-Ward, 2005). Instead, one must assess the whole of the complex system to understand its functionality (Miller & Twining-Ward, 2005). Complexity allows one to access emergent structures through both systems and process thinking, acknowledging the unpredictability of outcomes between time, relationships, organizations, technologies, and societies (Urry, 2005). “Complex systems are usually understood intuitively, as a phenomenon consisting of a large number of elements organized in a multilevel hierarchical structure where elements themselves could represent systems” (Jere Lazanski & Kljajić, 2006, p. 1). Complexity plays an important role within organizations because of the many subsystems incorporating knowledge, development, mental, emotional, community, physical, financial, and

energetic relations (Jere Lazanski & Kljajić, 2006). The research on complex systems has assessed the overall organization of systems and their ability to adapt and co-evolve through time; this includes evolving, dynamic, and self-organizing systems (Urry, 2005).

Complex systems must also continuously adapt. Adaptability denotes the ever changing and reorganizing of complex systems, as they react to new conditions, situations, or varied catalysts (Miller & Twining-Ward, 2005). In response to stimuli, an adaptive system will change itself to better adapt to a new situation (Miller & Twining-Ward, 2005). The combination of complexity and adaptability means that traditional causality does not take place (Miller & Twining-Ward, 2005). Systems are constantly in motion; while an organization may react a particular way to one set of stimuli, the system may then adapt to respond a different way to the same stimuli (Miller & Twining-Ward, 2005). For example, if an employee were to steal money from a tourism organization, the organization may then react by creating policies and procedures following the robbery. Therefore, should the organization be robbed again, the system will likely react in a different way than it had the first time.

Farsari-Zacharaki (2006) reasoned that the combination of complexity, adaptability, and systems equate to self-organization without a focus on the levels within a system or a central focus of control. The factor that makes human complex systems distinctive from other types of systems is their ability for prudence and purposeful action (Farsari-Zacharaki, 2006). Lichtenstein and Plowman (2009) built upon this point by stating that the individuals or components engaging with complex adaptive systems (CAS) "…recognize the meaning of a given exchange, and adjust their own behavior as their response to that meaning within the system. As they do so the system changes; it is

not the same system as it was before" (p. 619). All interactions and communications offer a chance for influencing the functionality of a system (Lichtenstein & Plowman, 2009). All tourism organizations include CAS at varied scales.

Convention Centers as Complex Adaptive Systems

Convention centers are a form of CAS, containing systems within the system such as departments, teams, and hierarchal management levels. CAS can take the form of the convention center itself, or departments and individuals whose outlooks or decisions can impact the greater system. Each unique system is ever changing and responding to interactions between employees, the creation, and implementation of policies, regulations, industry trends, outside influences, etc. This research used CAS theory as a conceptual framework to aid in illuminating how and why employees affect convention center sustainability programs.

Convention center systems incorporate smaller systems of employees whose perceptions and actions affect the functionality of a center. All personnel, from top tier to bottom tier employees, bestow individual outlooks on convention center sustainability programs. Perspectives and actions of employees are vital to convention center systems because essentially, they compose the systems (teams or individual activities) and maneuver the systems (developing and overseeing the center and events). The conceptual framework of CAS theory permits an "interpretive approach to a social reality" (Jabareen, 2009, p. 51), enabling CAS theory to be utilized as a way of interpreting my personal social realities as well as employee perceptions. Case studies offer unique tools for helping to gather information on perceptions by allowing for flexibility in planning,

organization, and data collection methods, encouraging broader scopes of understanding.

Summary of Reviewed Literature

The literature review provided background information on the field of tourism, convention centers, definition of sustainability, sustainable tourism, benefits, and challenges to sustainability, impacts of convention centers, sustainable tourism certification, and Complex Adaptive Systems theory. Tourism is one of the world's largest industries, with many benefits to local communities such as jobs, money, export services, and others (United Nations World Tourism Organization, 2014). The U.S. Travel Association (2015) categorizes tourism into leisure, and business travel. One of the largest facets of business travel is MICE, an industry greatly dependent on convention centers. Though convention centers are one of the fastest growing sectors within tourism, there is little research focusing on convention centers (Fenich, 1998; Kim et al., 2004; Yoo & Weber, 2005). Convention centers make large impacts on local communities, through environmental, economic, social, and institutional impacts. The need to remedy impacts, in addition to varying benefits such as marketing, branding, cost savings, etc. have encouraged convention centers to use sustainable practices (Draper, Dawson, & Casey, 2011; Park, & Boo, 2010; Sox et al., 2013; Tinnish, & Mehta Mangal, 2012).

Sustainability became a common term beginning in the 1980s and was shortly after adopted by the tourism industry (Butler, 1993; Makower, 2009). Some utilize the triple bottom line or the quadruple bottom line to understand sustainability; however, it has been argued that the triple bottom line lacks a key component and researchers have not yet settled on the missing piece of the fourth bottom line (Bendell & Kearins, 2005;

Norman & MacDonald, 2003; Springett, 2003; Teriman, Yigitcanlar, & Mayere, 2009; Wight, 2007). Instead, the fourth bottom line can be understood through institutional, governance/policy and ethics, which is categorized as institutional as a catch all term for all three. One of the challenges of the triple and quadruple bottom line concepts is that they do not incorporate the crossovers between the varying bottom lines. Instead of being distinct, separate bottom lines, the social, economic, environmental, and institutional components are dependent on one another as an interconnected system (Miller & Twining-Ward, 2005).

There are many benefits to the use of sustainable practices. The benefits of implementing sustainable practices include, gaining respect of consumers, technological development, improved public relations, cost savings, and improvement of market conditions (Miller & Twining-Ward, 2005). Sustainability programs can also offer competitive advantages, new revenue streams, and press and marketing possibilities (Camus, Hikkerova, & Sahut, 2012; Miller & Twining-Ward, 2005; Simons & Unterlofler, 2015; Ventriglia & Rios-Morales, 2013). The use of sustainable practices can enhance operational functionality, utilized technology, a decrease of water, energy and item consumption, cost savings or additional profits, tax breaks, and less waste for landfills (Bricker, Black, & Cottrell, 2013; Simons & Unterlofler, 2015; Ventriglia & Rios-Morales, 2013). In addition, sustainability programs provide education, increased staff productivity, engagement, capacity building, empowerment, autonomy, partnerships, and volunteer opportunities (Bricker, Black, & Cottrell, 2013). Therefore, there are many benefits to sustainability programs; however, the programs also have challenges.

There are also a number of challenges to sustainability programs. For sustainability programs to be successful, they must have employees with positive perceptions about sustainability, the program and the organization, in addition to program buy-in (Collier & Esteban, 2007). It is argued that employee buy-in and positive perceptions towards sustainability and sustainability policies are a critical, and a little studied component for convention centers to successfully work towards their sustainability goals (Simon & Unterkofler, 2015). Another challenge to sustainability programs are the ethical dilemmas related to sustainability (Swarbrooke, 1999). Organizations and employees may range from denying the importance of sustainability to believing that sustainability is the most important issue of their lifetime (Swarbrooke, 1999). Ethicality is a challenge for organizations when making decisions regarding their sustainability programs because they have to balance their overall needs with sustainability planning (Swarbrooke, 1999). Another challenge that organizations face is the definition of terms; there are numerous definitions for sustainability nomenclature (e.g., sustainability, green, etc.), which prevents organizations from communicating their sustainability strategies (Makower, 2009).

The confusion of terms related to sustainability (i.e., ‘green’, ‘sustainable’, ‘eco’, etc.) has led to an increase in greenwashing within the tourism industry. Organizations seeking to stand out and prove their commitment to sustainability many times work to achieve sustainability certifications. Other benefits for the use of sustainability certifications include, marketing, improved quality of life, and providing cost-savings (Honey & Stewart, 2002). There are a number of different certifications that convention centers can work to attain, which can lead managers to have some confusion when

choosing certifications. However, despite the confusion, 21 of the 40 largest convention centers in the United States have at least one sustainability certification. Most of the certifications used by U.S. convention centers focus primarily on the economic and environmental aspects of sustainability, putting little focus on the institutional, and social aspects. However, for certifications to be representative of sustainability within a convention center, they must acknowledge the components of sustainability as an inter-related system.

Recent tourism studies have begun to assess the sustainability of tourism as a Complex Adaptive System; however, convention center literature has not yet used Complex Adaptive Systems as a way of understanding sustainability in convention centers. Complex Adaptive Systems theory can offer a lens of understanding if and how positive perspectives of employees on sustainability and sustainability policies can assist convention centers to work towards their sustainability goals.

CHAPTER 3

METHODS

The purpose of this research was twofold: to understand employees' perceptions of the development, implementation, and challenges of convention center sustainability programs; and, explore the impact of employees on the development, and implementation of sustainability programs within U.S. certified sustainable convention centers. The research questions also asked about the role of the employee in the development and implementation of convention center sustainability programs. The following chapter details the methodology and methods of the study. The methods chapter includes a background on multiple instrumental case study designs, scoping for the study locations, data collection methods, data analysis, trustworthiness, and worldviews of the study.

Case Study Design

The exploratory study focused on employee perceptions of the role of the employee in the development, implementation, and challenges of sustainable practices within three certified sustainable convention centers using a multiple instrumental case study design. Within each case study, I analyzed the convention center's sustainability program, and focused on the features of the convention center sustainability programs such as policies, background information, documentation, operations, trainings, etc. In

addition, each case study incorporated the views of the management and key employees deemed the mot involved in the sustainability policy implementation. Data collection methods included observations, interviews, document analysis, field notes, and audiovisual materials.

The research design was a multiple instrumental case study (MICS) methodology. A MICS design incorporates CAS by enabling the researcher to study the performance process of cohesive, multiple bounded systems (cases) that function with purpose; this can include group dynamics, programs, or organizations (Anaf, Drummond, & Sheppard, 2007; Creswell, 2013; Marshall & Rossman, 2011). The purpose of an MICS is to understand a defined topic, difficulty, or concern by selecting specific cases that may allow for understanding a specific issue (Stake, 1995). By studying multiple cases, the researcher is able to "replicate" a study in different locations, allowing for more robust findings (Yin, 2009). The research incorporated the participants' points of view and my personal points of view (Marshall & Rossman, 2011). Case studies also allow for a holistic approach due to their functionality as an integrated/bounded system containing purposeful components (Anaf, Drummond, & Sheppard, 2007).

Each case was a unit of analysis, "a choice of what is to be studied" (Stake, 2005, p. 443). The study utilized an instrumental multiple case study design to help understand the existing sustainability programs, challenges to implementing sustainable practices, and the effects of employees on the implementation of sustainable practices in convention centers. One of the benefits of utilizing the case study design, were the opportunities to seek varied perspectives through multiple qualitative data collection methods (Denzin & Lincoln, 2011). The design encouraged data to be collected in multiple ways, utilizing

multiple lenses, offering a diversity of findings about a phenomenon (Baxter & Jack, 2008; Denzin & Lincoln, 2011). As organizations (convention centers in particular) are complex in nature, the use of multiple methods to acquire data was useful for deeper understanding (Grunow, 1995). Therefore, I utilized multiple qualitative methods, including observations, interviews, document analysis, field notes, and a content analysis of audiovisual materials.

Scope

Study Locations

There were a number of steps taken to decide on the locations for the cases in the study. I decided that I wanted to find three to four cases for the study. First, I read the industry literature about sustainability. Second, I attended industry conferences such as the Professional Convention Management Association (PCMA) Education Conference and the International Meeting Expo (IMEX) where I learned of convention centers that the industry deemed to be sustainability leaders and made contacts with professionals in the field. Third, as shown in Table 2.4, I assessed the sustainability certifications used by all Tier I and II U.S. convention center centers (containing at least 350,000 ft^2 of exhibit space). There were 21 centers that maintained a minimum of one sustainability certification. The sustainability certifications used by the centers greatly varied. Some centers had multiple sustainability certifications, others had just one, some certifications were first-party, and others were third-party. Fourth, I limited the study to centers that had either a "green team," sustainability manager or both. Fifth, I broke the 21 certified Tier I and II convention centers into regions, the South, Midwest, Intermountain West,

and West. Figure 3.1 shows the locations of the 21 centers and the breakdown of the four regions. Sixth, after breaking the centers into regions, I assessed the types (urban, suburban) and sizes of the cities where each center resided. For consistency and comparability purposes, I decided that each convention center needed to be located within a medium to large sized metropolitan region, with populations ranging from 1-2.5 million people. Seventh, four targeted centers were chosen with three alternative options based on each region in the United States. I discussed the potential centers and locations with a panel of specialists in tourism and urban planning. Eighth, I had from October 2015 until May 2016 to connect with the chosen convention centers and commit to interview dates between April 1, 2016 and June 30, 2016. Given the limitations of time to develop relationships with the centers and for data collection, I was able to get three centers to commit to the study. One of the centers was in the Midwest, one was in the South, and one was in the Intermountain West.

It became apparent, as I interacted with convention center managers, that there was a fear preventing convention center managers from participating in the study. A couple of the general managers from the sites I visited explained that convention centers did not want to get negative press from participating in the study, nor did the centers want to be singled out as poor examples of sustainability when compared with other convention centers. The interactions with the centers led me to the understanding that insuring anonymity of the convention centers and the individuals was imperative to the research design.

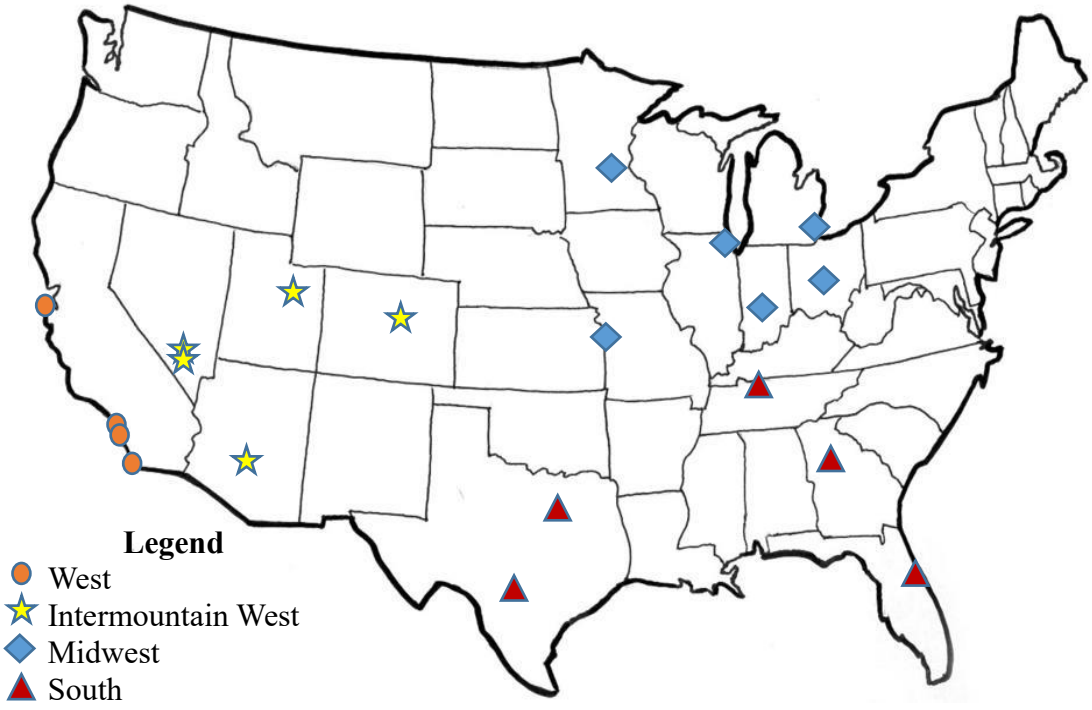


Figure 3.1. Map of the 21 certified sustainable Tier I and II U.S. convention centers separated by geographic regions.

Data Collection

There were a number of different types of data collected for the study. These included field notes, notes taken during interviews, audio recordings, transcripts, pictures and observational notes from tours, document analysis (sustainability reports, waste diversion reports, sustainability policy manuals, marketing pamphlets), informal conversations, and emails between myself and convention center staff members, websites and Facebook pages. Prior to completing the study, a committee of five tourism and urban planning specialists reviewed the interview protocol that I had developed. After the initial edit to the interview protocol, I discussed the protocol at a research workshop, which included 30 academics working on research in tourism. After the second edit with the research workshop, I resubmitted the interview protocol to the committee of five experts for final approval. Once I had the completed interview protocol, I began the data collection process.

Data collection consisted of a number of steps. The first step taken was to assess each center's website and the documents that they had available regarding sustainability such as marketing pamphlets, news articles, and press releases. I also assessed each of the center's Facebook pages to understand how they were marketing their sustainability program and searched the internet for any other web pages I could find that provided background information on the centers such as interviews with staff about their sustainability programs. The purpose of the early research was to obtain background information on each of the centers prior to initial contact so that I had a basis of knowledge. I also ended up using the knowledge to better connect with interviewees during the interviews because I was able to become familiar with the hierarchical

structure of the organizations and the names of the upper staff members. Prior to the study, I exchanged emails and had phone conversations with upper managers at the convention centers. For one of the centers, I was able to meet the general manager and marketing director in person 6 months prior to the commencement of the study. During the initial interactions, I explained the study and I asked them questions about their programs to better understand the management of the programs, and the individuals I would want to interview. I took notes on conversations with convention center contacts, which included a review convention center policies, background information (e.g., layout of the center, departments, history of the centers), and sustainability program reports. I also asked questions to ensure that the locations met the requirements for the scoping of the study. I took notes during in person meetings, phone calls, and saved the emails for later analysis.

Once I had traveled to each location to begin the study, I first took field notes before the interviews; these notes incorporated my personal perceptions and worldviews, notes from conversations with individuals working in each center in passing. I also took field notes at each of the breaks between interviews. The primary form of data collection was the semistructured interviews. I interviewed both managers and key employees who were involved in the centers' sustainability programs (Table 3.1 includes a complete list of those interviewed). In some cases, participants provided me with resources such as contracts with potential customers and employees and marketing tools that mentioned sustainability. Respondents provided me with some additional resources during the interviews and two respondents emailed me resources after the interviews. Each convention center provided me with a personal tour of their center. During the tours, I

Table 3.1 Primary Job Titles of Interview Respondents

Positions	# of Convention Center Employees		
	A	B	C
Upper Organizational Management	1	1	2
General Manager, Deputy Director, Assistant Director			
Marketing and Sales	2	1	2
Marketing Director, Director of Sales, Public Relations & Social Media Manager,			
Digital Marketing Specialist			
Sustainability Management		1	1
Sustainability Manager			
Operations and Maintenance	5	4	3
Director of Operations, Facility Maintenance, Chief Electrician, General Manager of			
Engineering, Engineering Manager, Chief Electrician, Lighting Technician, Transportation Supervisor			
Finance and Accounting	1	1	1
Senior Accountant, Director of Finance, Chief Financial Officer			
Catering	2	1	1
General Manager, Director of Operations, Executive Chef, Director of Sustainability			
for Catering			
Event Management	1	1	
Director of Events, Catering and Special Events Manager			
Housekeeping	2	2	1
Assistant Operations Manager, Environmental Services Manager, Janitor, Housekeeper			
Total	14	12	11

Note. Many employees held more than one job title.

took pictures of signage and items pertaining to the sustainability programs, and I also took notes on information shared and observations I had made during the tours.

Sampling

Sampling can be defined as "a smaller (but hopefully representative) collection of units from a population used to determine truths about that population (e.g., how a given population behaves in certain conditions" (Field, 2009, p. 793). Much of the published qualitative research has focused on in-depth data, with fairly small sample sizes that are purposeful or nonprobability samples (Farsari-Zacharaki, 2006). I collected purposive samples (Miles & Huberman, 1994) in this study based on theoretical data saturation. Glaser and Strauss (1967) defined theoretical saturation as the point when,

> No additional data are being found whereby the (researcher) can develop properties of the category. As he sees similar instances over and over again, the researcher becomes empirically confident that a category is saturated . . . when one category is saturated, nothing remains but to go on to new groups for data on other categories, and attempt to saturate these categories also. (p. 65)

A further study helped to operationalize thematic saturation by finding that thematic saturation occurred between the 6th and 12th interview, and stated that by the 12^{th} interview, as the majority of codes had been formulated (Guest, Bunce, & Johnson, 2006). The authors added that if a research goal was to assess two or more units of analysis, then a researcher should strive for 12 participants per group, dependent on common theme discovered (Guest, Bunce, & Johnson, 2006). This study collected a systematic sample that sought to reach data saturation at each of the three study sites.

Each case study utilized two respondent sampling techniques: criterion and snowball sampling. Criterion sampling is a purposeful sampling method, it "includes

cases that meet some criterion, useful for quality assurance" (Miles & Huberman, 1994, p.28). Criterion sampling can allow a researcher to select participants using predetermined criteria (Emmel, 2013). Criterion sampling can encourage pragmatic data sets that have sought to empirically explore phenomena (Emmel, 2013). Individuals chosen through criterion sampling consisted of people holding the same or similar job positions within each center; these consisted of four upper level managers who were the key people who had the greatest impact on the sustainability program. These job titles included the general manager (or assistant general manager), sustainability coordinator, operations director, and marketing director. The exact respondent titles varied slightly as job titles differed among locations. Other criterion samples were assigned by my convention center contacts and scheduled at the same time as the original criterion samples, based on individual involvement in the creation and implementation of sustainability programs.

The second sampling technique was snowball sampling. Snowball sampling "identifies cases of interest from people who know people who know what cases are information rich" (Miles & Huberman, 1994, p.28). Snowball sampling includes requesting individuals to propose individuals who could offer unique understandings of phenomena because they have extensive knowledge, or may be able to recommend other interesting individuals (Emmel, 2013). At the end of each interview, I asked the respondents if there was anyone fundamental that I needed to speak to about the sustainability program. Interviews with snowball samples were scheduled onsite with employees and managers. This technique allowed for more variation in the organizational hierarchy, departments, and job positions. Center and respondent names were not

included to maintain the anonymity of those interviewed.

Interviews

The study utilized two types of interviews—informal/conversational interviews and semistructured interviews. Interviews consist of exchanged views between two individuals (Marshall & Rossman, 2011). Informal/conversational interviews consist of open-ended questions, on the spot, and incorporate casual conversations between two people (Marshall & Rossman, 2011; Merriam, 2009). Informal/conversational interviews can be used when an interviewer does not know enough about a phenomenon to ask pertinent questions and wants to learn more about a subject to develop more structured questions for later interviews (Merriam, 2009). Due to the prior relationships I had developed with the venue managers, there was a lot of informal conversation prior, which provided important background information for both the study and the development of the interview questions for employees.

The second type of interview method used was semistructured interviews. Semistructured interviews require more systemized predetermined questions than an informal/conversational interview, but allow flexibility to adjust a question as needed or to ask additional questions should the interviewer feel a need for more information to help understand a particular topic during the interview (Merriam, 2009). There was no predetermined wording or order for questions, allowing conversations to flow more naturally (Merriam, 2009). In addition, I used semistructured interviews to elicit specific data from the participants as to better understand phenomena (Merriam, 2009). Flexibility within semistructured interviews allows the researcher to help elicit the unique

worldview of the participant and for the elaboration of new ideas on the topic being discussed (Merriam, 2009). By conducting interviews with upper management and diverse employees who were involved in sustainability programming, I was able to gain a better understanding of the challenges that they were facing, and the role that the employee played in the implementation of sustainable practices.

Prior to conducting the research, I developed a research plan that provided protocol for the formal interviews and flexibility should changes be required onsite. One of the protocols was to record the interviews. Boeije (2010) provided reasons that it is important to record interviews. First, recordings improve the quality of the data, allowing the researcher to focus on the conversation instead of taking notes or worrying about what was or was not important. Recordings capture both the interview questions and the responses, allowing a researcher to understand what was said and by whom. Recordings ensure data quality and show reviewers that the researcher cared about the quality of the research. Finally, recordings offer literal quotes, helping a researcher to analyze data and support their interpretations for publications. Prior to each interview, I communicated with participants through either informal communications used to schedule interviews or through an informed consent phase prior to the interviews. Prior to the start of each interview, I provided the participants with a written informed consent form, explained it verbally and then asked respondents if they verbally agreed to participate and recorded. Shared the protocol of the research and stressed that the participant had a choice as to whether they wanted to be audio recorded and could conclude the interview at any time (Boeije, 2010). The research plan included flexibility due to the possibility that some participants may not have wanted to be audio recorded, the possibility of shortened

interview times due to availability or important individuals who could only meet over the phone (Boeije, 2010). While I set the intention for conducted interviews to last the same length of time, it was not always possible. Prior to the study, the convention center managers who were coordinating my interactions with the participants made it clear to me that the individuals at the centers were extremely busy, and in order to reach necessary individuals, flexibility was required.

In addition to the research questions, the interviews incorporated a series of guiding questions that helped to answer the research questions. The following questions were used to guide each interview:

a) What are the key issues and policies of the sustainability programs?
b) How do convention centers successfully implement sustainability programs?
c) What factors have helped to make the convention center sustainability programs successful?
d) What are the challenges to the development and implementation of convention center sustainability programs, as perceived by employees?
e) What is the role of employees in the development of convention center sustainability programs?
f) What is the role of employees in the implementation of convention center sustainability programs?

I conducted 37 interviews in total from April 1, 2016 to June 30, 2016. Thirty-six interviews were face to face, and one was conducted via telephone due to scheduling constraints. Thirty-five of the interviews were audio recorded and transcribed; two of the interviews were not audio recorded. One was not audio recorded because of technical

difficulties, and the other was not audio recorded because the participant did not consent to be audio recorded. To accommodate for this, I took notes throughout all of the interviews. Recorded interviews were transcribed by Hess Transcriptions, using a standardized transcription protocol (McLellan, MacQueen, & Niedig, 2003). After receiving the completed transcripts, I checked them for accuracy against the recordings. Length of interviews ranged from 30-90 minutes. The interview protocol incorporated direct and indirect questions relating to program development, implementation, and challenges. There were also guiding questions that asked about the role of employees in convention centers (Appendix III and IV included complete list of guiding questions). Each interview comprised questions focused on employee purpose, accountability policies, reward systems, employee views on sustainability, and tasks and policies that were liked/disliked or were more easy/difficult, etc. The questions also addressed communication pathways within the organization to better understand the potential impact on the implementation of sustainability programs.

Document and Audiovisual Analysis

Document and archival analysis took a number of different forms. Creswell (2013) wrote of different types of documents that one might analyze. The ones most pertinent to this study were field notes, and the analysis of public and private documents such as records, archives, memos, policies, written procedures, etc. Other document forms that were included were promotional materials, demographic data, historical documents, websites, correspondence between myself and convention center employees, and contracts.

In addition to documents, I analyzed audio and visual documentation. This included blogs, photographs, postings on social media (e.g., Facebook, Twitter, Pinterest, etc.), websites, and signage (Creswell, 2013). I used the documents for two primary purposes. First, the documents provided background information for each of the centers. Prior to visiting each site, I did considerable research on the center so that I would have knowledge regarding their sustainability programs, the individuals working at the center, history of the centers and information regarding how the centers marketed themselves. I also used audio and visual documentation to help determine "where the emphasis lies after the data have been gathered" (Marshall & Rossman, 2011, pp. 161-162). I used the findings of the document analysis to support the findings from the interviews.

Document content analysis, including audio or visual materials, had ethical considerations. As the researcher, I had to consider how the use of the data could have negatively affected the organization, or the person who created the documents, videos, etc. (Marshall & Rossman, 2011). Therefore, it was imperative for me to consider the wellbeing of the organization and employees while employing the method (Marshall & Rossman, 2011). I prioritized ethical considerations throughout the data collection and analysis. I discussed questions concerning ethicality of document analysis with the General Manager or Sustainability Manager.

Observations

I also used observation as a form of data collection. Observational data collection included, "…a variety of activities that range from hanging around in the setting, getting to know people, and learning the routines to using strict time sampling to record actions

and interactions and using a checklist to tick off preestablished actions" (Marshall & Rossman, 2011, p. 139). Observational data took the form of field notes as an observer, an insider, participant, or a combination of all three (Creswell, 2013). The field notes taken included recording events and behaviors, and formal or informal interviews (Marshall & Rossman, 2011). Observation in this study was somewhat open-ended with the predetermined theme of learning about the background information, development, and implementation of sustainability policies within the convention center. Through open-ended entry, I was more likely to understand the behavior and relationships within the convention center (Marshall & Rossman, 2011). The observations took place during the location visits and through interactions and informal interviews with staff regarding sustainability policies. The information from the observations helped with the development of the interview questions and then checked the findings with employees through informal interviews. I compared the content of the field notes with the other methods to help answer the research questions.

Justification of Research Methods

Creswell (2013) stated that there were four primary methods for qualitative data collection: observations, interviews, documents, and audio/visual. This research collected data using all four methods. Table 3.2 included a list justifying the research methods.

Data Analysis

Data analysis consisted of many steps. Data analysis utilized QSR International's NVivo 11 Pro Software (2015). I used different coding methods for the data collected

Table 3.2 Justification for Research Methods

Informal/ Conversational Interviews	Semistructured Interviews	Document/ Audiovisual Analysis	Observations
Interviews offer perspectives through words to share feelings, thoughts, intentions, and behaviors during a previous time, worldviews, and meanings attached to them.		Many documents are accessible, free, and contain information that could otherwise be time intensive to collect	Observers can notice things that have becoming routine for participants, helping to understand a context
Interviews allow researcher to understand things they cannot observe		Particularly helpful to understand how convention centers are marketing themselves externally to the public	Can help to triangulate emerging findings
Frequently used in qualitative case study research		More objective or unobtrusive forms of data	Research sees things firsthand instead of relying solely on once-removed accounts from interviews
Allow for flexibility and exploration of a topic through no predetermined questions	Allows researcher to elicit specific data from the participant	Provides descriptive information	Behavior can be recorded as it is occurring
Recommended when a researcher does not know enough about a phenomenon to ask pertinent questions	Flexibility in questions encourages researcher to adjust to each unique situation	Allows for easy comparative analysis	Provides knowledge of the context, incidents, behaviors creating reference points for interviews
Help researcher to develop interview questions for more structured interviews	Flexibility in questions supports the researcher to elicit the unique worldviews of each participant	Can verify/ create hypotheses or new understandings	Observations can allow a researcher to understand a topic that participants are not able or willing to discuss
Frequently used in case study research	Flexibility in questions assists the researcher to better understand new ideas on a topic	Offer a historical background or understandings	
Frequently used in conjunction with observation in early stages of the study		Track changes/ development within organizations	

Note. "Justification for Research Methods" from Marshall & Rossman (2011); Merriam (2009); Patton (2002).

based on the coding methods that most aligned with the research questions and goals of the study.

Structural Coding

I used structural coding to organize and interpret the data from my interview notes, and interview transcripts. Structural coding can provide content-based representations in the form of categorizations, themes, and indexes allowing researchers to address questions (Saldeña, 2013). “Structural coding generally results in the identification of large segments of text on broad topics; these segments can then form the basis for an in-depth analysis within or across topics” (MacQueen & Guest, 2008, p. 125). One of the strengths of structural coding is that it linked the data to the research questions, which allowed for a connection between “data collection and the evidence generated” (Guest, MacQueen, & Namey, 2012, p. 75). The organization and efficiency in analysis while utilizing structural coding allowed for a foundation of idea linkages between the literature review, CAS, and to the findings (Guest, MacQueen, & Namey, 2012). Once data were analyzed using structural coding, the proceeding steps integrated CAS theory into the summation and discussion. My code inclusion criteria also added that, should a participant provide a verbal cue regarding a previous question, I would add the quote to the findings from the previous question (MacQueen, McLellan-Lemal, Bartholow, & Milstein, 2008).

There were a number of steps to the structural coding process. Initial coding took place using my interview notes, which I compared with the interview transcripts to ensure authenticity of understanding, direct usage of respondent words, quotes, and phrases.

First, data were separated by the convention center, and then by each interview question. Second, using each interview question as a broad categories and direct interpretations, I developed codes based on similar findings within the data to maintain as much of the original language as possible. Third, I compiled codes to create broad categories. Fourth, frequencies were tallied, based on individual respondents who discussed each category, to understand the emphasis placed on various responses. Fifth, I repeated the same process with the other two centers, starting with the previously developed codes and adding additional codes to the lists as needed. Sixth, I developed reports for each question and convention center to aid in classifying, which codes and ideas were similar, and which infrequently arose (Saldeña, 2013). Seventh, the codes from the three centers were then merged, per question to assess the greater themes across the centers.

Content Coding

I used content coding (analytic coding) for the other forms of data including field notes, documents, websites, and Facebook posts. I utilized content coding to seek larger themes and a "bigger picture" (Saldeña, 2013). There were many steps to the content coding process. First, as I repeatedly reviewed data through naturalistic generalizations, this method required that I develop codes to represent similar findings in the data (Saldeña, 2013). I allowed codes to organically emerge from the findings. Second, with each new code, I re-reviewed all of the data, searching and reflecting on the descriptions of the codes (Saldeña, 2013). Third, I merged the codes to develop broader dimensions in the data (Saldeña, 2013). Fourth, I compared to content coded themes to the structural coded themes to help strengthen the analysis (Saldeña, 2013). Fifth, questions were then

compiled into the larger categories based on the research questions (Saldeña, 2013). After compiling the findings, I analyzed the codes and trends using the conceptual framework of Complex Adaptive Systems theory and the four-vector definition of sustainability.

Trustworthiness

Triangulation or credibility within the case studies was addressed by collecting multiple forms of data from three distinct cases, incorporating many respondents, and utilizing a variety of methods and data collection inputs (Creswell, 2013; Marshall & Rossman, 2011). Trustworthiness was established by using initial coding during interviews transcriptions (Saldeña, 2013); writing a reflective journal throughout the process (Saldeña, 2013); and with consistent interview techniques (Krefting, 1991). Examples of trustworthiness techniques used included taking field notes during interviews and while coding; creating an interview transcript that I used to explain the procedures; and I asked each respondent the same interview questions, insuring uniform procedures throughout my interviews.

Philosophical Assumptions

Philosophical assumptions play an important role in the understanding of qualitative research (Creswell, 2013). I used four assumptions to direct the study: ontology, epistemology, axiology, and methodology (Creswell, 2013; Denzin & Lincoln, 2011). The interpretive framework that most closely aligned with the research was constructivism. Constructivist research endeavors to comprehend the background context underlying an individual's constructed outlook. Constructivist researchers seek to

understand, “people’s constructions of meanings in the context being studied, because it is these constructions that constitute social realities and underlie all human action” (Greene, 2000, p. 986). A constructivist ontological perspective acknowledges that individuals create meaning through lived experience, including interactions with others (Denzin & Lincoln, 2011). This outlook encourages a researcher to engage in the research process with participants to safeguard that the knowledge acquired is a mirrored representation of their reality (Denzin & Lincoln, 2011). In the case of the study, I interviewed many individuals and as the researcher, I took an active role in trying to reflect the meanings of participant realities in the findings. The epistemological viewpoint for constructivism adds to the ontological perspective, by stating that, in addition to life experience forming individuals, data generated from research reflect the life experiences of the researcher and participants (Denzin & Lincoln, 2011). Axiology refers to values, and how a researcher’s unique worldviews may affect a study (Creswell, 2013). Prior to the research, I acknowledged that my worldviews, life experiences, emotions, morals, principles, and interests would help construct meaning for the study (Tufford & Newman, 2012). While my intention was to understand the thoughts and perceptions of the study participants, I acknowledged as a researcher that I assigned my own meanings to the research I conducted (Yin, 2011). I had worked in the event industry for 15 years, as an event planner, manager, and in event rentals. I had never worked for a convention center; however, I had worked at convention centers. One of my strengths and weaknesses in this research was that I was familiar with industry, the jargon, and challenges.

My industry experiences led me to both emic and etic perceptions of convention

center functionality and sustainability programs (Yin, 2011). My emic perspectives related to understanding views of convention center employees regarding sustainability programs (Yin, 2011). My etic perceptions represented my perceptions as a researcher (Yin, 2011). Prior to conducting the study, I met with numerous convention center employees to discuss the study. Before, during and after conducting the research, I wrote my emic and etic perspectives in my field notes as to help me acknowledge how those views may have affected the outcomes of the study. I acknowledged that I approached the research from a positive perspective, seeking to find challenges in convention center sustainability programs, yet not necessarily unveiling negative attributes of the centers considered leaders in the industry. Before conducting the study, I assumed a certain level of personal knowledge on how convention centers were organized and run. I also went into the study with a preconceived notion based on the research that employee buy-in was going to be a key finding based on the literature findings and discussions with center employees. I also believed that the size of a center greatly impacted the functionality of the center. My worldviews definitely affected my outlook on the research, and allowed me to relate to the individuals interviewed because I have experience in the same industry.

Constructivist methodologies address the meanings within the research process (Creswell, 2013). Crabtree and Miller (1992) developed a cycle of inquiry to help conceptualize research entitled, *Shiva's Circle of Constructivist Inquiry*. In essence, the research cycle depicted that theory and explanations help one to understand experiences and anomalies. From those, the researcher designs and conducts a research investigation to help ask questions related to the theories and experiences. Data collection commences

to cultivate new information regarding the subject. Finally, interpretation and analysis take place to help explain the theory, explanations, experiences, and anomalies. They said that a researcher's goal in the process is to balance between participation and separation from the study. The investigation followed the circle of inquiry; I constructed the study through a combination of both research findings and discussions with individuals in the convention center industry. The research design enabled me to collect various forms of data. I then analyzed and interpreted the data to build upon the previous research of sustainability programs in convention centers, while answering the research questions.

CHAPTER 4

RESULTS

The results chapter detailed the findings of the investigation. Respondents invited to participate in this study included 13 women and 24 men, ranging in age from 18 to 65. These individuals represented the diversity of workforce positions and included managers, directors, and front-line employees (Table 3.1). I conducted the interviews at each of the convention centers until I saw saturation. I used structural coding to understand how the findings answer the research questions. There were four primary dimensions within the research *development, implementation, challenges, and understandings and usage of sustainable practices beyond the workplace*. This chapter presented the dimensions, themes, and subthemes. At the end of each of the sections within the chapter, there are tables that identify quotes related to each of the dimensions, themes, and subthemes.

As previously stated, maintaining anonymity for the centers was an imperative; there were also many similarities in the findings between the three convention centers. Therefore, the majority of the results that I discussed represented merged findings between the three centers. However, in cases where there were significant differences, where I felt anonymity could be maintained, I also shared the differences between the three convention centers.

Program Development

I defined the dimension *program development* by the actions taken and methods of beginning each sustainability program. It included the program origins, process of changing organizational culture, and operations. This dimension sought to answer the first research question, which asked about the development of convention center sustainability programs as perceived by employees. The dimension program development also addressed the fourth research question, which asked about the role of employees in the development of convention center sustainability programs. Figure 4.1 described the stages and themes within the program development phase. Initial themes of the study focused on the "nuts and bolts" of sustainable program development. Themes within program development included, top-down strategy; management buy-in; initial trainings; employee pushback; trial and error; "low hanging fruit"; certifications as program validation; and sustainability managers. Table 4.1 provides characteristic and supporting quotes from the themes and subthemes relating to the development stages of the convention center sustainability programs.

An Individual or Group with a Vision

The development of the sustainability programs was consistently organic; cultivated from an initial vision and passion by one individual or group of individuals. The person or group of people were committed convention center employees who had worked for the center a minimum of 5 years. My field notes reflected my awe in hearing the stories told by the founders of the programs. Programs were started by those who were bothered by things that they were seeing in their centers, including waste left

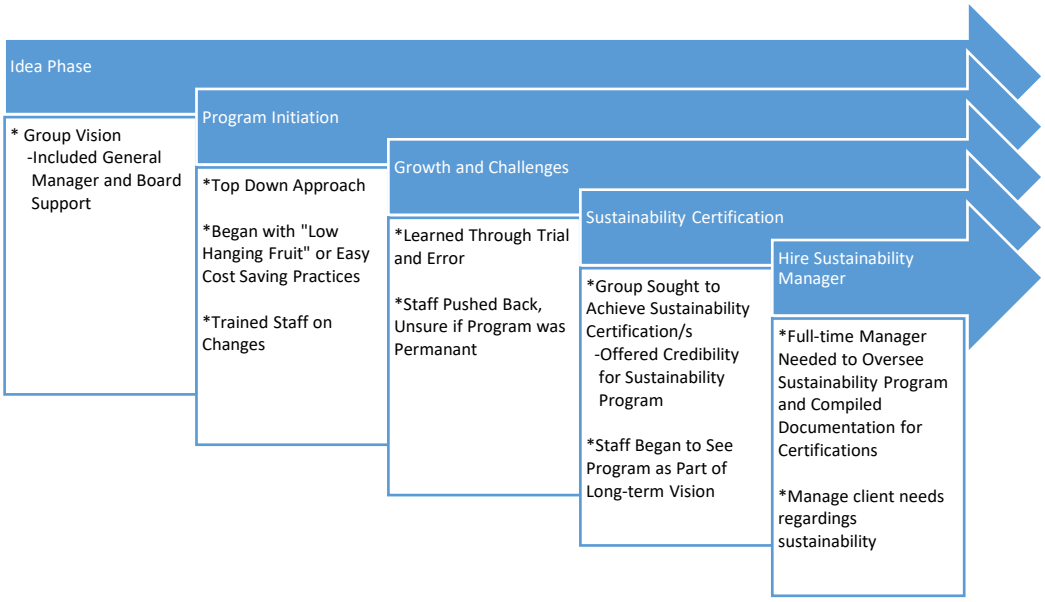


Figure 4.1. Stages of convention center sustainability program development.

Table 4.1 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Program Development

Dimensions (bold), themes (italics) and subthemes (indented)	Definition of Dimensions and Representative Quotes
Program Development	Defined as the steps taken and processes of sustainability program development.
An Individual or Group with a Vision	• "Our initial person was [our sustainability manager]. We tasked all of our managers at the time as well with [the sustainability manager] to come up with programs, ideas. It was [their] job to sit with each of our managers and look at different ways that we could implement sustainability programs. Look at different ways, what practices could we change or put into play that we didn't already have in play. What products could we convert to and purchase. So, really at the end of the day I would say it was a group effort being led by [the sustainability manager], who we tasked to do that."
General Manager (GM) or Executive Director Support	• "I think that starts with our general manager and then kind of filters down." • "I would say it would be a combination of the sustainability manager working with our general manager, because if you don't get the support at the top, then the rest isn't going to follow. I think it starts there. Then it's through the approval and direction of the GM…As we all know, going sustainable isn't always the least expensive route. And so, from a budgetary standpoint, you want to make sure you've got that kind of support to be able to substantiate, "Now, let's go ahead and work -- unfold the program.""
Top-down Strategy	• "Our employees are the individuals that do it on a day-to-day basis. I would say management, and then upper management are required to make sure those employees are doing those day-to-day responsibilities. And then, our executive team is even further required just to make sure we have progression in those policies and procedures." • "You can only do so much grassroots. So I think they [employees] would be more positive about it if they saw more about it, and heard more about it. Like maybe they [managers] could communicate to their employees better."
Initial Training	• "In the beginning, we came up with a comprehensive training program to talk to all the employees. We had all-staff meetings, we'd talk about the value of sustainability, and the importance of sustainability, and then we'd actually take it, department by department and kind of work them through what their responsibility was in all this."

Table 4.1 continued

Dimensions (bold), themes (italics) and subthemes (indented)	Definition of Dimensions and Representative Quotes
	•
Employee Pushback	• "The pushback is not near what it was the first few years. Everybody thought if they pushed back in the beginning that it would go away and guess what? It didn't, but it could still if we don't constantly say it's the right thing to do and tell everybody at every chance we get, at every juncture, you can start seeing it get a little off track, and it's like, no, no, no."
Trial and Error	• "At the very beginning it was, it was a clumsy roll-out because they didn't really understand what sustainability was about. Nobody did. You know, we all -- in this business, you always look for the return on the investment. Well, there wasn't a return that was a local return. It was a return that benefited the customer."
"Low Hanging Fruit"	• "We started this in 2010. Very slow. We started it with very basic stuff. Getting our recycling stations put in place in our common areas and inside of our offices. Once we got that in place, then we started developing different members and came up with a strategy of how we wanted to make this happen."
Certification as Program Validation	• "Energize the employees and the committee into not only just doing what we do at [the center], but improving the whole community for their kids, and their grandkids."
Sustainability Managers	• The sustainability program, "got too big and she [the sustainability manager] was the perfect person to handle it, and to piss off all of our staff and do operational standard as far as sorting trash." • "Everyone who I have talked to from her assistant, interns, employees walking through the halls, etc. have told me that they love working with [our sustainability manager]. They all feel that she was really the game changer to come and give the existing sustainability program structure."

Note. Names were removed from quotes to protect anonymity and replaced with job titles in brackets

behind, exhaust fumes and recyclables sent to landfill. There were no consistencies among job titles of individuals, who helped found programs.

General Manager or Executive Director Support

One commonality within the development of each program was general manager or director support. All three centers said that the sustainability programs started because of the support from upper management, specifically the general manager (GM) or executive director (ED). **“**I think it always starts at the GM. [The general manager] had the vision. And it's taken to the board. And then it's -- everything trickles down.” In centers A and B, the GM or ED took part in founding the sustainability programs, who collaborated with passionate employees with a shared vision. Center C’s sustainability program had existed the longest; they began with item donations which was started by an employee. However, once Center C began to implement more sustainable practices, the GM or ED supported the program development.

Top-Down Strategy

The centers used a top-down approach for sustainability program development. Everyone at the center played an important role. “It needs to be top-driven for people to pay attention.” The executive team and managers created the vision for the sustainability program, managers provided the trainings and guidance, and staff implemented the programs on a day-to-day basis, overall suggesting the programs began as top-down hierarchies.

Initial Training

Training was a frequently discussed topic in the interviews. The most common form of initial training referenced by respondents was “word of mouth,” “on the job,” “awareness,” where employees “learn by doing.” Respondents explained that new employees received an initial training, if their job incorporated sustainability. New employees also had to acknowledge the sustainability program when they signed the employment contract.

Employee Pushback

Initially, many employees did not like the sustainability programs. Many employees would not implement the new sustainability policies because they did not think that the program would last in the long-term. They felt that the program created more work with few rewards. The quote below described the push back from employees of the catering company and how the actions were managed.

> There was a time where [the catering company] decided to throw away a bunch of Coke bottles and, uh, I remember just how upset [the operations manager] was, and he walked over there and had a very serious conversation with [the catering company] and said, you can't do this.

As time progressed and managers continued to stress the importance, the employees began to see that the sustainability programs were permanent. This led employees to start feeling more accustomed to the policies, to better understand the reasoning for the programs, and they began to feel more positive about the sustainability programs.

Trial and Error

At the beginning of the programs, the three sustainability programs learned through their efforts. Some of the endeavors did not work; others worked well but needed improvement. The program trial and error was explained as,

> …a moving target. What do we do to fix this? That's kind of like what we're talking about. We created people like [the Recycling Supervisor]. We locked up the compactors. We did further education for our internal staff. We partnered up with staffing companies that we have not maintained a long-lasting relationship with.

As the center studied were early adopters of sustainability practices, there were no "best practice" examples available to learn from at the time. Instead, each of the programs had to learn through trial and error.

"Low Hanging Fruit"

The programs started slowly, first with "low hanging fruit," or easy changes associated with cost savings. Modifying energy consumption and donating leftover or excess materials were some of the first practices. Contracts and marketing materials moved from printed to electronic formats. Escalators, lights, and heating/ air conditioning were on motion activation, timers, or turned off when not in use. These actions helped to consume less energy and saved hundreds of thousands of dollars a year. Many respondents mentioned the benefits of donating usable waste from shows to local charities (i.e., books, particleboard, signage, etc.). Not only did donations improve staff and client feelings about the center, but also in some cases, clients were enabled to choose the charities where their items went, which also allowed them to publicize their donation efforts.

Certification as Program Validation

The respondents saw sustainability certifications as important aspects of each of the sustainability programs. Certifications such as LEED, ISO 14001, APEX/ASTM, and state-specific certifications fit into the existing sustainability programs in a number of ways. Most respondents said certifications provided recognition and credence to their programs, displaying that they "walk the talk." According to respondents, certifications provided guidelines, framework, and goals to accomplish, they improved operational function, and their required quantitative documentation allowed centers to continually track progress, and cost savings. The centers created sustainability or waste reports to highlight the tracked progress. Additionally, certifications gave clients confidence and helped with staff management in part because the staff liked the bragging rights of having acquired certification. All of the centers also displayed their certifications on their office walls, websites, and marketing materials.

Sustainability Managers

As the programs grew, Centers B and C brought on full-time sustainability managers. Due to the enormous growth of the program, sustainability managers placed 100% of their efforts towards the program. Many respondents felt that the hiring of a full-time sustainability manager was when the programs truly bloomed. Prior to hiring a sustainability manager, the centers participated in a few environmental practices such as recycling or changing lightbulbs, but the sustainability managers were the ones who really started the current programs. This demonstrated a change in operations, a tipping point of sorts, in commitment and level of support. Full-time sustainability managers

assisted the efforts through tracking metrics, program management, and marketing and in coordinating efforts between departments. Sustainability managers also followed industry trends, offered creativity, and provided passion for sustainability and the program. They worked directly with clients to offer options, helped clients meet their own goals, and educated clients, and staff about the program. In addition, they helped motivate and engage staff and helped compile the paperwork required for the certifications. One respondent said, “Well, the sustainability manager, she's the one that kind of puts forth the programs that [they]'d like to see us implement like, as far as water savings. And then that -- trickles down. [The sustainability manager] has the motivation.” My field notes repeatedly mimicked my awe as to how the sustainability managers inspired the staff to participate in their sustainability programs.

Implementation

The dimension *implementation* referred to the process of maintaining the sustainability programs once they were established. The dimension implementation provided support in the notion of the second research question, which asked how sustainability programs were implemented, as perceived by employees. The dimension also sought to answer the fifth research question, which asked about the role of the employee in the implementation of the convention center sustainability programs. The dimension implementation was represented by several themes, including, environmental issues and policies; program successes; social sustainability issues and policies; communication pathways; and education and training. Within the themes were subthemes.

Environmental Practices

The theme environmental practices addressed the primary environmental policies included as part of the convention center sustainability programs. While much of the investigation focused on social aspects of sustainability within the center, the convention center sustainability programs themselves were mostly concentrated on environmental sustainability practices. Table 4.2 described this by providing an overview of respondent's perceptions of the key issues addressed in their center's sustainability policies. Many of the social policies included training on the environmental policies and pleasing clients. Respondents linked environmental sustainability to economic sustainability in many cases. Respondents explained that environmental practices had initial potential for cost savings when the programs began but as the programs became more established, the costs became greater as the centers wanted to further their programs. Institutional sustainability was the least mentioned of the four aspects of sustainability. The visual provided by Table 4.2 helped to answer the second research question, how are programs implemented, as perceived by employees. I also confirmed the findings with center brochures, websites, and social media. Of the environmental practices discussed by respondents, waste management, resource consumption, and purchasing were by far the most mentioned practices. The following subthemes discussed the specifics of waste management, resource consumption, and purchasing.

Waste Management

There were many key issues and policies addressed within centers' sustainability programs. Most respondents mentioned waste and recycling at least once. Respondents

Table 4.2 Respondent's Perceptions of Key Issues Addressed in Their Center's Sustainability Policies, Separated by Type of Sustainable Practice

Key Issues Addressed in Sustainability Policies	Specifics of Practice	Center		
		A	B	C
Environmental Policies				
Recycling	Steel, carpet, cleaning supplies, grease, pallets, paper, cardboard, bottles, cans, metal, lightbulbs, batteries	X	X	X
Composting	Food items, liquids and plant matter	X	X	
Compostable Items Converted to Energy	Food items, liquids, and grease are converted to biogas for energy			X
Energy Consumption	Electric, conservation, daylight harvesting, scheduling lighting, HVAC and escalators to only work when events are running	X	X	X
Conscious Purchasing	Nontoxic cleaning products, buying local and/or biodegradable items, purchasing compostable or recyclable utensils, cups, plates, bowls, buying bulk condiments, recycled paper	X	X	X
Environmentally Focused Certifications	LEED, APEX/ASTM, GreenSeal, ISO 14001, Statewide Green Venue Certifications	X	X	X
Air	HVAC, temperature controls, CO_2 level monitoring, sensors for fans	X	X	X
Donations	Food, furniture, leftover items from events such as books and signage	X	X	X
Steam Usage	Efficient use of steam to help manage temperature within the center	X		
Water Consumption	Low flush toilets, automatic sinks, only serving water when asked for it	X	X	X
No Idle Programs	Limited idling vehicles to 5 minutes	X	X	
Cleaning Water	Before waste water is released in the river, the center cleaned it, condensate reclaim system	X	X	X
Operations	Efficiency, functionality (ways in which events were hosted), processes (keeping doors closed to prevent heat/ cooling loss), optimization	X	X	X
Limited/ No Printing	Tried to keep most to all documents electronic, double-sided printing if required	X	X	
Herb/ Plant Garden	Grew plants to use for events at the centers		X	X
Beehives	Kept beehives onsite to use honey for events		X	
Green Roof	Had a living roof on top of the building with native plants to help manage heating and cooling	X		
Solar Panels	Had solar panels on the roof to create energy		X	X
Alternative Transportation	Staff were encouraged to bike, carpool, ride the bus or carpool to work		X	X
Environmental Protection	Lesson impacts, awareness of footprint	X	X	X
Track Metrics	Calculated carbon footprint for center and events, data transparency	X	X	X
Reduce	Reduction of waste	X	X	
Reuse	The reuse of items that did not have to be thrown away	X	X	

Table 4.2 continued

Key Issues Addressed in Sustainability Policies	Specifics of Practice	Center		
		A	B	C
Upgrading/ Updating	Purchasing energy efficient equipment, building for efficiency	X	X	X
Housekeeping	Limiting chemical use, using microfiber rags	X	X	X
Client Services	Postevent sustainability reports on environmental sustainability, weighing waste diversion		X	X
Social Policies				
Corporate Social Responsibility (CSR)	Employees and attendees volunteering at local events or with partners	X	X	X
Education and Awareness for Nonemployees	For attendees, clients through the use of signage and staff directing waste diversion, helping clients become more sustainable	X	X	X
No-Smoking Policy	Smoking was only allowed at designated smoking areas, aware from entrances and loading docks	X		X
Staff Health and Wellness	Access to a gym, step counters, continuing education classes such as computers, cooking, health, weight training, yoga		X	X
Staff Management	Maintaining a happy, productive workplace	X	X	X
Staff Training/ Awareness	Employee engagement, training, education and awareness regarding the sustainability programs	X	X	X
Being a Leader	In the community, in the event industry, for other employees	X	X	X
Safety	Safety of all stakeholders in the center		X	X
Staff Cafeteria	Offering staff healthy subsidized food options onsite			X
Client Services	Personalized customer service, sustainability manager, sustainability tours of facility		X	X
Local Partnerships	Being good neighbors, community engagement	X	X	
Staff Retention	Worked to retain staff by keeping staff employed	X	X	X
Economic Sustainability				
Budgeting	Programs included awareness of cost, included sustainability into financial contracts	X	X	X
Cost Saving Practices	Reducing energy, air, water consumption for cost savings, assessing cost versus client needs	X	X	X
Host events year after year	To continue, the center had to sustain itself by recruiting, retaining clients, sustain brand meaning, and also being financially stable			X
Institutional Sustainability				
Vendors	Sought who agreed to participate in the sustainability program	X		
Goal Setting	Centers worked to continually improve their sustainability programs	X	X	X
Consistency with County or City	County or City had sustainability programs that the center wanted to or had to be aligned with		X	X
Brand	Maintaining a respected brand			X

appeared motivated by experiences concerning “shocking” amounts of waste created by designers, exhibitors, and events. The following quote depicted the issues with waste:

> We just had thousands of books from this show and usually they would make us throw that away. They're like, “no, throw it away, it's recycled.” And, before I'd be like, "we're going to hell if I throw this away." *(Laughs)* So now, we can save all that stuff, and we know it's gonna go somewhere.

The respondents shared the benefits of waste diversion such as cost savings and donating food, furniture, particleboard, books, and other exhibit materials to charities with their communities. In addition, respondents referenced recycling of metal, carpet, pallets, paper, cleaning supplies, bottles, cans, plastic, and lightbulbs. The centers had huge bins in the back of the house that had signs displaying where each of the recycled items should have been placed, so anyone who went back there was aware of the items being recycled. The centers also separated food waste and used it either for compost or to create biodiesel. The programs inspired respondents and as a result, they expressed positive feelings about their respective jobs.

Resource Consumption

After waste, the second largest issue emphasized in the sustainability programs was resource consumption. Resource consumption included paper use or energy from electricity, air (HVAC), monitoring of CO^2 levels, steam, water (upgrading to low flush toilets, automatic sinks), conservation of resources, green roofs, daylight harvesting, building design, daylighting through use of large windows and drapes when necessary, and adding solar panels to offset energy consumption. A related topic was operational efficiency, functionality (ability to successfully host events), and processes. Examples of operational practices were keeping doors closed to prevent air loss, and selling optimal

size spaces for clients' needs (which also saves energy).

Purchasing

The third most important topic highlighted by respondents was purchasing. The respondents described ways in which they made very conscious and purposeful purchasing choices. These included compostable and recyclable products (e.g., utensils, plates, and cups), bulk purchases, biodegradable or green cleaning products, microfiber mops/towels, and local or regional food (meat, cage-free eggs). Examples provided by respondents in catering included, "using 100 percent compostable plates and boats and wrap, and cups."

Program Successes

Respondents shared intense pride regarding what they viewed were the greatest successes within sustainability programs. Respondents said they were proud of the waste diversion created by the centers' programs including recycling, composting, and food donations. Convention center waste diversion reports, sustainability reports and websites also supported these sentiments.

Respondents liked the overall improvement of the centers. The centers were cleaner, operations were more efficient, food offered was healthier, and they liked the solar panels and electric charging stations. Individuals liked seeing a significant reduction in consumption of resources like water and energy. Most respondents had been there from the beginning, and were proud to have seen the sustainability program start from nothing and build into a larger program. Individuals loved that programs led to

connections between people, engaging upper management, the board, the local community, and employees. Connections also encouraged better coordination, volunteer opportunities, and enhanced employee education. Respondents felt that certifications, accolades, and awards were important accomplishments. Quantitative numbers published in reports, cost savings, and relatively fast returns on investment (ROI) from their sustainability programs amazed the respondents. Respondents viewed programs as a way of saving the natural environment, the world and gave respondents a reason to feel pride in their job because they were doing the right thing and setting an example. Overall, respondents felt that the sustainability programs improved and supported their communities, helped their center become a leader in the industry, enhanced salability, and created a more comfortable experience for their patrons. Respondents also mentioned plans for renovations, retrofits, capital improvements, and the success of the centers' nonsmoking policies. My field notes expressed the excitement and pride that the employees maintained throughout the interviews as they described their greatest successes. The program websites also emphasized the program attributes that the respondents focused on throughout the interviews.

Social Engagement

The theme social engagement included various aspects of social sustainability. The centers addressed social sustainability, through the ways in which they managed their staff, as they implemented the sustainability programs. There were nine subthemes under social sustainability, including a culture of employee buy-in, I am… a co-owner of my center, importance of understanding why, lack of understanding, collaborative efforts,

"do your job," meeting client needs, employee health and wellness, local partnerships, educating clients about sustainability, departmental specific sustainability integration, and younger generations' passion for sustainability. An important part of development and implementation of the programs was stakeholder engagement; this chapter covered a number of different types of stakeholder engagement. To help clarify the findings, I described my understanding of stakeholders in Tables 4.3 and 4.4.

A Culture of Employee Buy-In

Respondents viewed the implementation of sustainability programs as dependent on several mechanisms, employees being the most important mechanism. Employee buy-in was a common theme among respondents. Respondents said that managers could mandate policies but the employees who implemented the practices on a day-to-day basis had to want to implement the policy. To be successful, centers needed to cultivate a culture of buy-in instead of simply creating rules, enabling staff to do their jobs. Having a sense of buy-in towards the sustainability program and feeling personal ownership of their convention center also helped respondents to stay motivated, to feel involved by offering new ideas for the programs, to look out for one another (as they tended to be graded on excellence of the program together), and to help with group synergy.

As I walked around the centers, I observed that there were signs in every room both in the front and back of house, reminding individuals of the impacts that they were making, and the efforts that they should make to recycle, limit paper towels, turn lights off, etc. Respondents said that procurement of employee buy-in was dependent on directive leadership, education and/or training, clear signage, informational meetings

Table 4.3 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Implementation of Environmental Issues and Policies

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Implementation	Defined by the steps taken and processes of ongoing program implementation once the programs had been established.
Environmental Issues and Policies	
Waste Management	• "By being proactive in areas like waste management and kind of extra monitoring the food systems, we can make sure that the kind of trash goes to where it's supposed to go. And if it's not trash, it can be recycled or, you know, reused."
Resource Consumption	• "Continuing reduction of energy consumption. Water usage was a big one. We put in all the low flows on the toilets, on everything that's the front of house, so things that get used *a lot*. Lighting… HVAC… We do things like shut off certain areas of the building for steam to avoid the losses in the piping… And over the last two, three years you can see a slow reduction."
Purchasing	• "100 percent compostable plates and boats and wrap and cups" • "We actually found a farmer here, and we went and saw his ranch, about a month and a half ago. And we're gonna start using his beef in some of our units"
Program Successes	• "It's all a battle here, but it just seems to be cleaner here by us doing our recycling program. It's just amazing how we've tightened it up, cleaned it up."

Table 4.4 Key Convention Center Stakeholders

Key Stakeholders (*In no particular order*)	Entities/ Individuals Included as Part of the Stakeholder Group
Convention Center Managing Board	Elected or appointed officials to help oversee the direction and management of the convention center
General Manager	General Manager, Assistant General Manager
Managers	Upper management to lower management
Employees	Full-time, part-time, temporary and specialty contractor brought on for specific jobs (such as elevator servicing, construction, etc.)
Partners	Varied by center, included both exclusive and nonexclusive contracts hired by the convention center to fulfill needs. Offices could be housed onsite or offsite. Examples were, the catering company, electrical company, janitorial company, local composting organizations, local organizations who took donations, local organizations in need of volunteers, etc.
Vendors	Varied by the center, included both exclusive and nonexclusive contracts, hired by the convention center and clients. Could include printing and shipping services, restaurants, event rentals, photography, event planners, designers, emergency medical services, massage therapy, entertainers, translators, etc.
Destination	Convention and visitors bureau (CVB), destination marketing organization (DMO), the city and the county
Exhibitors	Individuals or organizations with an event exhibition who have their own needs such as power, design or events within an event
Clients	Event planners, general managers/ executive directors, staff of organizations hosting or planning to host events at the center
Public	Neighbors of the center, public citizens

(e.g., preconference meetings, consistent communication, or team meetings), reminders, coaching, staff wellness programs, incorporation of sustainability into job descriptions, certifications, transparent reporting, and accountability through rewards and consequences. Employee buy-in led to successful operations such as waste reduction and diversion. Programs also encouraged community engagement/local buy-in, sales/marketing opportunities, and an ability to better meet client needs and interests. Sustainability of the center was dependent on staff turnover, grassroots ideas, budgets, and the program costs.

I Am…a Co-owner of My Center

Respondents agreed that employees were crucial to successful program development and implementation. Collectively, respondents indicated that employees were the ones who made sustainability programs happen. “Doing one’s part” and “leading by example” was consistent amongst respondents. However, the respondents also said that one of the most successful tactics that they had used to acquire program buy-in was to cultivate a culture of center ownership. If individual employees felt that the convention center was ‘their center’, then employees were likely to feel more invested in the wellbeing of the convention center. They explained that through employee buy-in and center ownership, employees felt happier, which ultimately encouraged them to work harder. One of the most remarkable stories that I noted in my field notes was the story of a janitor who kept saying “my employees” throughout the interview. In the moment, I got confused, as I thought that the person did not have a supervisory position. The person then clarified and told me that “my employees” was just the way that they referenced all

of the convention center employees. The story illustrated the importance and power of center ownership for employees.

Importance of Understanding Why

Understanding the reasoning behind the policies in the sustainability program was vital to employees taking ownership of the programs and the center itself. “If they don’t see the sense of it, but someone’s making them do it, you’re gonna get rebellion there.” If employees understood why they were required to participate in the sustainability program and understood the impact of their actions, they were more likely to participate. Employees who did not understand the reasons for the sustainability programs were more prone to “act out,” and would not make extra efforts to participate.

Lack of Understanding

Unfortunately, while many acknowledged the importance of understanding why the sustainability programs existed, numerous respondents stated that they felt there was a lack of understanding why the programs existed among many staff members. Various respondents complained that they knew what actions were required but they did not understand why the actions were necessary or what impacts the actions made. Respondents who did not understand the purpose of the sustainability practices tended to be less enthusiastic about the sustainability programs and frequently referred to the program as something that others were actively involved in, but they themselves were not.

Collaborative Efforts

Numerous respondents viewed participation in the sustainability program as something in which every member of their center was involved. For a successful program to exist, it was explained that directors needed to not only develop and implement the programs; they had to participate as well. At the same time, the programs also needed the participation of lower level staff. Therefore, many saw the sustainability programs as a "sandwich" in which the higher leveled employees and lower leveled employees worked together and met in the middle to find common ground.

"Do Your Job"

A common theme among some respondents (especially at convention center C) was that it was not important for employees to understand the reason for the sustainability practices or the sustainability program. Instead, some said that employees should simply "do their job," "follow rules," and "participate in the center's mission." One respondent said that employees, "…should be following all of our protocols. Do your job and follow the rules." Respondents explained that if an employee's job incorporated sustainability practices, then if one did their job sufficiently, they would be participating in the sustainability program. Those that viewed the program in this light tended to see sustainability as something integrated into the center and not a separate program that existed within the center.

Meeting Client Needs

One of the primary purposes of the sustainability programs was to meet client needs. Respondents viewed the purpose of the programs to provide clients with options, customer service, and helping them to better achieve their goals. Each of the centers had sustainability websites specifically targeted to potential and current clients, exhibitors, and the public. Each of the sites provided contact information for discussing the sustainability programs, as to better meet client needs.

Employee Health and Wellness

Points mentioned less frequently were employee health and wellness. Social wellness programs at all of the centers included health insurance and vacation time. Employee wellness programs existed at two of the three centers. Centers B and C offered self-improvement classes for employees such as yoga, languages, computers, public speaking, healthy eating, and cooking classes. Center C also offered access to workout equipment onsite, step counters for all employees provided a cellphone, and a cafeteria with subsidized meals. The center websites did not express the benefits offered to employees, nor did they mention the health and wellness aspects of their sustainability programs.

Local Partnerships

There were two type of partners discussed in the interviews. First, there were the partners who ran their organizations onsite, integrated as part of the convention center. These partners had often exclusive contracts with the center such as a catering company,

electrical company, or janitorial business. The partners provided everything related to those services and worked as an integral part of the center. The center's GM or ED also helped to oversee the management of the organizations. The second type of partner was the types that existed outside of the center, including neighboring businesses and organizations providing services (such as recycling or composting). All three of the convention centers discussed the need to be good neighbors to other businesses and the surrounding community. There were a variety of local partnerships discussed, donating unused goods from events to local charities, purchasing local food, products, and partnerships that collect compost, recycling, etc. In addition, the Convention Center B developed partnerships with the community to management onsite gardens, and beehives for cooking with herbs, vegetables, and honey.

Educating Clients About Sustainability

Respondents said that with hundreds of events held at the centers every year, and thousands of people visiting the convention centers, training clients, exhibitors, attendees, and the public was ongoing. The center's first line of education for clients was signage. Convention centers placed signage for clients and the public in bathrooms regarding water usage, near trashcans to explain waste diversion practices, and in other places to educate individuals about the center's sustainable practices.

One of the primary roles that convention center staff played in the sustainability programs was to continuously train and educate clients, and the public. Many of the sustainability practices available at the centers existed for clients. Centers A and B sometimes placed staff near waste bins for events, to help educate the attendees on waste

diversion practices. Centers B and C offered the option for events to weigh their waste, so that attendees could see how much waste went to landfill, recycling, and compost. The staff educated the event planners about their options to weigh their waste and receive a sustainability postevent report. Staff explained the policies, signage, and promoted the sustainability programs.

Departmental Specific Sustainability Integration

Results indicated job roles and responsibilities influenced the intensity of involvement in sustainability programs. Some departments were more involved in the sustainability programs than others. Involvement was dependent on the departmental position, managers' interest in the sustainability program, individual job titles, and employee passion. For example, housekeeping ensured that waste was deposited in the correct receptacles; engineers monitored water and energy consumption; while the security department was less involved outside of limiting the amount of time that vehicles were left running. One participant said that the,

> …housekeeping department is on a day-to-day basis probably the most involved of the departments. Obviously engineering, to get the LEED certification engineering had to do a lot of things at that point, to follow a lot of programs, but it's just part of their daily activity now. But the housekeeping every day they are in trash cans or in compost around complex.

The observations written in my field notes also acknowledged conversations with employees outside of the interviews. Many employees I spoke with had little knowledge of the specifics of the sustainability program. However, many would proudly explain to me things that the center was doing without discussing the sustainability program (for instance, the subsidized lunches).

Younger Generations' Passion for Sustainability

Respondents said that younger, newer employees, who typically had more education, had a tendency to be more motivated to participate in the sustainability programs. Respondents also explained that the younger, more educated employees helped to motivate the older, (many times) less educated employees to participate in the sustainability programs. The challenge that respondents expressed regarding the younger employees, was that they were not as committed to the centers as older employees. Instead, younger employees were more likely to move to other organizations and change positions based on personal gain as they were less bound to the organization. My field notes showed my surprise throughout the interviews that the younger employees tended to have more knowledge and enthusiasm than the older employees of the centers. However, most of the younger employees also had plans to leave the centers and continue their careers elsewhere.

All the themes regarding implementation of social engagement are summed up in Table 4.5.

Accountability

Convention centers held employees accountable for their participation in the sustainability programs in a number of ways. Respondents explained that sustainability programs could be included as part of the hiring contract for employees (full-time, part-time, contract, and temporary), and vendors. Center C provided me with a sustainable materials management manual, which detailed their sustainability program. Each new employee was required to sign the manual agreeing to participate in the program prior to

Table 4.5 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Implementation of Social Engagement

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Implementation	Defined by the steps taken and processes of ongoing program implementation once the programs had been established.
Social Engagement	
A Culture of Employee Buy-in	• "It's gotta be from top to bottom, there's only a few people at the top that need to buy-on completely. But, those 40 employees at the bottom are what allow us to go out into the community and operate on a daily basis with these practices."
I am…a Co-owner of my Center	• "I think, what we're looking to do is have everybody take ownership, and it's not just the sustainability program, it's every aspect of this building."
Importance of Understanding Why	• "Talking to them, having 'em come to a meeting once in a while to see what we're talking about. Letting 'em know how important it is for our building, for our ecosystem. How important it is for our clients, if they want that… I think just spreading the word."
Lack of Understanding	• "The sustainability program is not to the point that we really actually understand what the program is all about. We know that there's a program and we know what we're supposed to do with a lot of stuff but as to why?"
Collaborative Efforts	• "There is buy-in from the top and a lot of directors. But a lot of the bottom-up people are trained and they're the ones that think it's interesting that really take pride in it. So, it's kind of the sandwich. It's not so much a command from on high or a grassroots movement that executives have no knowledge of. There's no sustainability coup d'état going on at the convention center. At this point in the life of our sustainability, it's a very collaborative, all throughout the mix effort."
"Do Your Job"	• "Their role should be to support it and follow guidelines like recycling the plastic and the cardboard." • "Like if you were to ask set-up, they don't have a sustainability program within set-up. But not knowingly, they're just taking out the trash and putting in the recycling the way we recycle stuff. The way we separate things. They're part of the sustainability program. So there's some that are actually involved in creating it, and then there are some that are just, the folks is, their normal routine is, "This is our job." You're not thinking sustainability. You're just doing your job, which is kind of a covert piece."

Table 4.5 continued

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Meeting Clients Needs	• "Our sole focus is to make sure that our client's needs are met, and to do it in a sustainable way. But our client's needs are met first and foremost. Because if our clients' needs aren't met and we have no clients and we are not very sustainable."
Employee Health and Wellness	• "There is a professional development and training program that is done through the whole county, with classes for public speaking, presentation, Excel, Spanish, all kinds of things. I'm going to try to work on getting sustainability to be one of those classes that are offered." • "Cheap food, subsidized; a free gym (who knows if it's used?). Step counters on all phones, free education-language classes, healthy eating classes, cooking classes, computers." –Quote from my field notes.
Local Partnerships	• "We partner with local small businesses, whether it's different bakeries, people that maybe make jams or preserves and, local farms to bring in produce, and proteins. Whether it's lamb or buffalo or chicken." • "We bring in our composting partner and, and go over the process and brainstorm. Did it work out this time that we had the bins here? Do we wanna change that? What did you find as you were going through working like mad having to save the kitchen waste for compost? How did that work for you? We're constantly refining that way."
Educating Clients About Sustainability	• "Telling clients about our program and making sure they're informed and that clients are aware of our program and how they can participate."
Departmental Specific Sustainability Integration	• "Engineering, electricians and daily involvement due to the operation of the system, and then housekeeping obviously in what they do. Some of the things like security they'll monitor busing outside… Our setup crews, technical services crew, they don't really have much."
Younger Generations' Passion for Sustainability	• "It's hard to get them [employees] excited about it. Some, not everybody, I'm kind of speaking in generality, 'cuz there's some people, I find our younger event managers they're excited about it. They buy into it, they're typically younger, typically more educated, they love it, they buy into it, they promote it. It's just kind of keeping them around all the others, it helps push it."

starting employment. Once an employee was hired, it was the manager's responsibility to ensure their subordinates are involved in the programs; therefore, supervisor awareness was a key to successful program implementation.

Write Ups

Respondents said that the convention centers treated sustainability policies like any other policy. Employees who did not participate in the program were reported to their managers, written up, and eventually fired. One example was,

> If we find one team or one person that's not [participating], they are constantly bringing the wrong bags, they are not bringing in the right compactor because we've got separate compactors for each of those obviously, they can be written up.

Respondents further explained that as long as employees were doing their job (which included sustainable practices), then there would not be problems. My field notes showed how many employees had to pause for an extended time before giving this answer. Many felt that write ups were a very last resort and most managers did not use that method for accountability.

Performance Appraisals

Respondents from two of the centers said that their centers incorporated involvement in the sustainability program as part of an "employee's monthly scorecard" or "annual performance review." Respondents also felt that centers who did not incorporate the sustainability program into their performance review should. Many respondents differentiated part-time or temporary employees, stating that a lack of policy compliance could lead to removal of employees from the work schedule.

Honor Systems

Other respondents said that the centers did not reprimand employees for lack of participation; employees were on an honor system. Instead of organizational consequences, the centers provided information, tools, continual reminders, and "constant conversations" to motivate employees. One respondent explained their view of the honor system, "It's not like I've written somebody up, there's not a lot that they have to do, I guess. It's the management staff that's managing and doing and it's not really a challenge in my mind." By educating employees and creating an open door policy, where employees could be involved in the evolution of the sustainability programs, managers hoped to engage employees so that negative consequences were not required. A selection of the responses can be seen in Table 4.6.

Rewards

The centers also rewarded employees for their involvement in the sustainability programs. Respondents listed different types of rewards given by the centers to recognize employees for exceptional performance. Rewards included tangible gifts, public recognition by managers, or a combination of the two. However, some respondents said that there were no rewards for employee involvement in sustainability programs.

Tangible Rewards

Respondents spoke of a number of different tangible awards given for exemplary participation in the sustainability program. Tangible rewards for involvement in the sustainability programs included "free food," "lunches," "parties," "tickets to attend

Table 4.6 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Implementation of Accountability in Sustainability Programs in U.S. Certified Sustainable Convention Centers

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Implementation	Defined by the steps taken and processes of ongoing program implementation once the programs had been established.
Accountability	
Write Ups	• "You will get written up. You will get in trouble. If I catch you throwing a bag in the recycle compactor or some trash in the recycle, or recycle in the trash and I catch you, you'll be in trouble."
Performance Appraisals	• "We ensure that in, as part of their performance appraisals there's a score sheet on how, how well they're supposed to do their job."
Honor System	• "Boy, I'm not sure there is any accountability. It's more of a -- kind of a honor system more than anything." • "I'm not gonna say that we've written anybody up -- 'cause, you know, if you give 'em the proper information, you give 'em the proper tools, they're gonna do what you ask 'em to do.

events," "gift cards," "cash," and "prizes." Several respondents discussed rewards in the form of special privileges such as field trips to see a recycling plant, special parking spots, paid work time to garden, attend classes, or to volunteer for partnering organizations.

Public Recognition

Multiple respondents discussed verbal praise as the primary way of celebrating an employee's engagement with the sustainability programs. Some respondents mentioned public recognition in the form of an "award ceremony" where the general manager or an individual's departmental manager delivered a printed award. Other forms of public recognition included personal acknowledgment from a manager, a photo of those involved in the sustainability program, a write up in a newsletter, printed posters with an individual's picture around the center, social media or visual television screens placed around the center.

No Recognition Needed

Many respondents also felt that there were no positive rewards to involvement in the sustainability programs. Multiple respondents saw rewards as the knowledge that an individual was "doing the right thing," "bettering the environment," "doing their job," "meeting client needs," "attracting future events," and helping the center to receive "positive press." Respondents added that the centers needed more recognition because recognition was important. A final note discussed by a few respondents was the reward for doing one's job well is the hope of an eventual raise. Representative quotes from this

dimension are shown in Table 4.7.

Communication Pathways

Communication was an important part of convention center functionality. I defined the theme communication pathways, by the ways in which managers internally communicated ongoing information regarding the sustainability programs with the employees. The subthemes relating to the theme of communication pathways were meetings, signage, and other forms of communication.

Meetings

Respondents said that there were a number of pathways for internal communication about sustainability and the sustainability program within the convention centers. Respondents said that one of the primary forms of communication between managers and employees was meetings. The meetings discussed by respondents included manager meetings, staff meetings, and team meetings. Other formal meetings mentioned by multiple respondents were trainings with specific purposes such as “green team,” “precon” (preevent), or operational meetings. For more established employees, respondents said that ongoing sit-down employee trainings took place in “roundtable discussions” or “question and answer sessions,” “individual meetings,” “small group meetings” (team, departmental, manager specific), and annual center-wide meetings. Centers A and B discussed green team meetings as a way of communicating the program plan.

Table 4.7 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Implementation of Rewards in Sustainability Programs in U.S. Certified Sustainable Convention Centers

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Implementation	Defined by the steps taken and processes of ongoing program implementation once the programs had been established.
Rewards	
Tangible Rewards	• "One time I even won $100, so I was happy about that. I was like oh, well, all that stuff I'm doing, I got me a little extra something. So that was nice." • "He showed it to me. He gave me a copy of it and I took it home and showed my kids… That's my reward right there and I'm happy about it… and I ain't think I was going to be seen for that. But actually, somebody's watching."
Public Recognition	• "They have an award – I think it's quarterly… they get somebody up on stage and they give them a plaque and a gift card for the person that's most involved that most impacted the program throughout that time. And honors them upstage. Recognition is huge."
No Recognition Needed	• "There isn't any sort of reward or recognition, because they told the client what they should be telling the client."

Signage

Signage was another common form of communication to staff members. The staff breakrooms had important flyers posted on bulletins boards. Center B had electronic building displays near their breakrooms. Instructional posters were also placed in the back of house to notify employees and event staff where items needed to be placed (cardboard, glass, etc.). There were also posters and electronic building displays placed around the front of house at each center, focused on attendees, and the public. However, respondents said that the convention centers assumed that staff also read those as well. Figure 4.2 displays examples of back of house signage.

Other Forms of Communication

In addition to the above points, respondents mentioned a variety of other communication pathways. There were a combination of methods used to communicate with staff regarding the sustainability programs, including: informational and formal "emails," "word of mouth," and/or through the sustainability manager, "sales materials" such as "brochures" and postevent reports, newsletters, visual programs such as gardens, sustainability buttons that are worn by staff, or awards, and certifications received by the center. Lesser-used forms of communication included "websites," "social media," "press," and "staff luncheons." Examples of representative quotes can be seen in Table 4.8.

Figure 4.2. Back of house signage.

Table 4.8 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Implementation of Communication Pathways

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Implementation	Defined by the steps taken and processes of ongoing program implementation once the programs had been established.
Communication Pathways	
Meetings	• "We have meetings all the time. So you've got manager's meetings, you've got manager supervisor's meetings, you have division meetings, and you have full building meetings. And then we also have the intranet."
Signage	• "We post things on bulletin boards internally for staff. We have signage everywhere about our LEED Certifications… We have signage in all the bathrooms that, talk about our LEED programs. Postings or emails. We have a company communication board that's electronic that's by all of our timeclocks and we may communicate stuff over that. I think it's just a combination."
Other Forms of Communication	• "Emails" • "Word of mouth" • "Sales materials," "brochures" • "Monthly newsletter" • "Websites" • "Social media" • "Press" • "Staff luncheons"

Education and Training

Training and education were frequently discussed topics in the interviews. Respondents discussed a number of different forms of education and training. Respondents explained that new employees received an initial training, if their job incorporated sustainability. The most common forms of education and training were word of mouth, department specific, and center-wide meetings.

Word of Mouth

The most common form of training referenced by respondents was "word of mouth." This form of training was also described as, "on the job," "awareness," where employees "learn by doing." There was expectation that managers and employees would express their common knowledge with other employees to ensure that other employees shared in the same knowledge.

Department Specific

After word of mouth, respondents discussed how trainings many times varied by department. As previously mentioned, involvement in the sustainability program was seen to have varied by department. One respondent said,

> How are they trained? Well, I guess we just have departmental meetings, and we just kind of brainstorm everything that we're thinking about doing and how we should go about doing it. And, and tell the guys recycle. If you can recycle, you recycle. If you can avoid power washing or something like that we put it off as long as we can.

Some departments were more proactive about their sustainability trainings than others. Respondents discussed how a supervisor's interest in the sustainability program affected

the trainings that their department received. If a supervisor did not care about the sustainability program, it was likely that their department had little training, and vice versa for supervisors who were dedicated to the sustainability program.

Center-wide Meetings

Respondents discussed annual, biannual or quarterly center-wide meetings. Due to employees working varied shifts at different times of the day, each center-wide meeting was actually comprised of two to three meetings. The varied meetings helped to ensure that all employees received the same information. The center-wide meetings included space to train employees on the sustainability policies or provided time to remind employees about the sustainability programs.

Green Team Meetings

Center A had an active green team. Center B had previously had a green team that had gone by the wayside but they were recreating an active green team. Green team meetings took place on a monthly basis and consisted of employees who voluntarily joined from every department. One respondent explained the purpose of the green team,

> I think everybody [is] at the green meetings; we have all of our contractors in that room. [The catering contractor], [the housekeeping contractor], and a faction of every part of the building is in that green meeting. So, whatever we talk about, like I said, they'll go back and they'll talk to their employees about what was said. So, everybody's made aware of -- that's how word is spread.

Both Centers A and B spoke of the many benefits to having a green team. One of the most powerful advantages of a green team was the ability to train, educate, and engage employees with the sustainability program. The employees then shared the information

that they acquired from the green team with their individual departments. Center C had previously had a green team but decided that the concept of the green team was outdated as everyone at the center should have been actively involved in sustainability.

Visual Training Materials

Respondents spoke of a number of different visual training materials to educate employees on the sustainability programs. Visual training and education materials discussed by respondents were online, email communications or in the forms of signage, employee "handbooks," "reviewing numbers," "financial statements," "electronic files," "sustainability reports," "green e-news," and "PowerPoint videos." Other materials acted as constant reminders for employees to engage with the sustainability programs such as "green buttons" (that employees physically wore) or "slogans." Data from this section can be seen in Table 4.9.

Challenges

As the convention center sustainability programs evolved, challenges arose that the centers had to overcome. The dimension challenges referred to the challenges relating to the planning and implementation of the sustainability programs. The dimension challenges also helped to understand the third research question, which asked about the challenges to development and implementation of sustainability programs, as perceived by convention center employees. There were six themes associated with sustainability program challenges, initial buy-in; diversity of staff roles; education, training and awareness; operations; program costs; and center size. Many of the themes also had

Table 4.9 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Implementation of Education and Training

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Implementation	Defined by the steps taken and processes of ongoing program implementation once the programs had been established.
Education and Training	
Word of Mouth	• "I really haven't been trained that much. You know it's just kind of from the managers themselves, whatever we receive we pass down. That's the only training I've gotten out of the program. I mean when they asked me about the LEED program when I was coming in here I don't know."
Department Specific	• "We just have departmental meetings, and we just kind of brainstorm everything that we're thinking about doing and how we should go about doing it. And, and tell the guys recycle." • "I don't know if we go to meetings and stuff to discuss it. You know, I don't know how other departments do it. I think it comes down from the supervisor down. I really don't know 'cause I'm not involved in that concept." • "We will pull the engineers together in their shop. The electricians will pull together in their shop. Building services, in their storeroom. Housekeeping on the exhibit hall floor. Management in management meetings, you know, weekly and monthly basis.
Center-wide Meetings	• "We talk about, we have four all-staff meetings a year where I'll say something, [the sustainability manager] will say something again about just reminding them of the importance of it."
Green Team Meetings	• "By having monthly meetings and whatnot, it kind of puts it on everyone to tell anyone who's under them or in a different department maybe from their organization that it's also their role to do it."

Table 4.9 continued

Dimensions (bold), Themes (italics) and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Visual Training Materials	• Every time we get a new vendor, we would send 'em a little note, like when we get their W9, we would send them this little note saying -- along with their, invoice, that we're a green venue facility and just let 'em know what we're all about. That's one way to connect to vendors that're doing business with 'em -- with us. • "Handbooks" • "Reviewing numbers" • "Financial statements" • "Electronic files" • "Sustainability reports" • "Green e-news" • "PowerPoint videos" • "Green buttons" • "Slogans"

subthemes.

Initial Buy-in

The theme initial buy-in referred to the beginning stages of the sustainability programs, and the challenge of acquiring staff buy-in towards the programs. Initial buy-in referenced the steps required for staff members to accept, support and act on the required policy changes because they believed in the program goals. The theme initial buy-in included the subthemes, changing organizational culture; empowering passionate people; and required buy-in from all employee categories.

Changing Organizational Culture

Many respondents discussed how the first 3 years of the sustainability programs were the most challenging. It was difficult for centers to change their organizational cultures, to incorporate sustainability into jobs and to get staff buy-in towards the sustainability programs. Many staff members initially treated sustainability as a fad that would eventually dissipate.

Empowering Passionate People

Staff discussed how one of their most successful tactics to help change organizational culture was to place passionate people in positions of power. Employees who bought into the program and were given lead positions would motivate others to take responsibility for their actions. Respondents explained that by taking responsibility and showing dedication to sustainable practices, employees made larger efforts to comply

with the policies because they did not want to create more work for their co-workers. One respondent explained the reason for promoting passionate people, “I guess we’ve learned that if we do that, it makes a little more impact on our players, our people because they take a little more ownership in it, so they're being a little more careful.” Respondents explained that motivated employees were more likely to hold each other accountable in a relatable way, so to have an impassioned employee promoted led the programs to greater success.

Required Buy-in From all Employee Categories

Respondents repeatedly mentioned employee buy-in and engagement throughout the interviews. Buy-in and engagement were ongoing challenges because there were so many types of employees to engage in the sustainability programs. There were a number of different employee categories working at the centers, full-time employees, part-time employees, temporary employees, contract workers, vendors, onsite partners. Within those categories, staff ranged from salaried, hourly, contract, and many were union workers.

Respondents said that changing employee behavior was difficult during program initiations. As programs became established and individuals deemed that programs were not just a fad, employees increased participation. After preliminary changes, ongoing employee buy-in from temporary and part-time employees was a continuing challenge because they did not spend a lot of time at the centers. Temporary employees typically did not receive as much training, so it was difficult to hold them accountable for the implementation of the sustainability program.

Vendors and onsite partners also had their own budgets and their own employees who worked at the centers as employees. Onsite partners were exclusive subcontracted service providers that offered fundamental services to the convention center such as janitorial staffing, catering, and electricians. The partners had separate managers, budgets and employees, but worked hand-in-hand with the convention center. Subcontracted partners had to work within the guidelines and management of the convention center, while also working under the guidance and operations of their own national or global offices. The partners varied by the center, all three of the centers had a catering company running the catering at the center and those organizations each had their own employees who were managed by the catering company and the convention center managers. Vendors were also separate subcontracted organizations that existed onsite, or came in for specific events based on client needs and collaborated with the convention centers, maintaining their own managers and budgets. Some vendors were exclusive, others were not and hired on by clients. Vendors were not as involved in the day-to-day functionality of the convention center. Vendors varied by the center but included printing and shipping services, restaurants, event rentals, photography, event planners, event designers, medical services, massage therapy, entertainers, translators, etc. Therefore, employee buy-in included direct convention center staff and indirect onsite partners' or vendors' staff (which also included full-time, part-time, temporary, and contract employees).

Most respondents felt that unions, contract workers, and vendors affected the implementation of the convention center sustainability programs. Respondents said that unions, contract workers, and vendors struggled with program buy-in, largely because they had not received as much training and did not view it as part of their job.

Respondents said that they thought many of these employees were unaware or simply did not care. Some respondents viewed these types of employees as less likely to engage in sustainability programs because of the cost of training. However, they also said that while initial buy-in to the programs was the most challenging, it did get easier with time.

Interviews alluded to possible reasons for challenges with employee buy-in. First, separation of donation items, recycling, and composting could be difficult when there was a fast turnaround time between events. Second, doing one's job could be difficult when guests were around, leaving tasks to be postponed or forgotten. Third, not all staff members knew what other departments did. Fourth, many felt that there was a lack of cross training; therefore, employees did not feel as invested in the center or the sustainability program. Fifth, respondents felt that it was challenging to continually make the sustainability program interesting. Data are presented in Table 4.10.

Education, Training, and Awareness

The theme education, training, and awareness categorized the challenges associated with educating, training, and awareness among employees, partners, clients, attendees. and the public. Employees spoke of ongoing challenges relating to the dissemination of information regarding the sustainability programs. There were a number of subthemes within the theme education, training, and awareness including, ongoing internal, and external messaging; consistency in trainings; frequency in trainings; and outside of the green team.

Table 4.10 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Challenges of Initial Buy-In

Dimensions (bold), Themes (italics), Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Challenges	Defined by the challenges to both program development and ongoing implementation of the sustainability programs
Initial Buy-In	
Changing Organizational Culture	• "The concept, the mindset, that was the toughest part, getting everybody to make that shift, that was really a quantum leap with a lot of people. And they weren't ready for it."
Empowering Passionate People	• "A lot of people didn't know we were recycling at first. And I was like, "Well, what do you mean you didn't know? We've been doing it for years. We have trash and recycle. What do you mean you didn't know?" And they said that they thought it was just more of a show. And I'm like, "No. It's not a show. We really do go through that stuff." And a lot of people feel bad about that, too."
Required Buy-in from all Employee Categories	• "Trying to get everybody to buy-in is the key thing, at least for me. If you can get employee participation, 100 percent, everybody in this building, then I think you got something. And that's what we're trying to create now." • "The main thing is to get everybody to buy into it. If everybody buys into it, it just makes it so much easier for the ones that do the work." • "We're not busy 24/7, we are cyclical. You know, so you'll go to where you don't see people. And again, you know, if you're gone for a little while, you come back, it's a brand-new day, everything's brand new to you. It's like no; didn't I tell you this last show?" • "Contractors, come in the building for week and do something, because they are building a room or building this or building that. So, there's other people that are here constantly because they work for a general service contractor, or vendor. One of those companies, they kind of know, but they don't have, they are not full time employees, they are here for the paycheck. It's harder to get them to participate."

Ongoing Internal Messaging

Training and continual awareness was another challenge. The centers were constantly training staff (full-time, part-time, and temporary/contract workers), vendors, partners, clients, exhibitors, attendees, and the public about their programs. A respondent shared their views on the ongoing internal messaging for varied stakeholders.

> Internally within the center, for the employees there's the intranet which has the [information]-- that shows all of our initiatives. And then to attendees and delegates, there's a number of signs throughout saying "This facility is LEED for these reasons," in the bathroom some places it will say "This urinal has been replaced with X to save this much water," or "these lights do this." We mention that we have LEDs.

Constant reminders through signage and trainings helped staff to educate outside individuals on participation in the sustainability programs. In fact, I observed that the convention centers had strategically placed bulletin boards in staff break rooms with notifications regarding the sustainability programs for staff that did not have access to a computer as part of their job.

Consistency in Trainings

Respondents viewed staff trainings as a constant work in progress. Center B even resorted to locking the gates to their recycling and compost facilities because individuals were throwing the wrong items in the compactors and were negatively affecting the waste diversion rates. Respondents said that for convention center sustainability programs to be successful, stakeholders needed to be educated and education had to be ongoing. Some respondents complained that decorators are particularly wasteful, as their creations are frequently single-use, they rarely remove the items after events, and yet, they are nearly impossible to train on sustainability policies.

Frequency in Trainings

There was a lot of discrepancy among the staff as to the frequency of staff trainings on the sustainability programs. Respondent answers varied between "one to two times a year," department or team specific, as needed based on new goals and policies, "daily," "ongoing," "constant," "quarterly," "monthly," "sporadic," varied by event, throughout the year, and none at all. While in some cases the trainings depended on the individual departments, many staff members discussed that they did not know what was happening (regarding the sustainability program). Other individuals said that they were familiar with the sustainability program and the sustainability practices used by the convention center, but "no why" or justification for the program or policies. Many said the centers needed more training or official trainings for all staff members. Respondents described industry wide education on the importance of sustainability as a challenge. Additionally, guest and attendee training was an ongoing challenge that respondents found frustrating because they would impact the centers' waste diversion rates.

Outside the Green Team

Respondents also mentioned that trainings were different for Centers A and B that had green teams. Centers who had green teams felt that the education for employees outside of the green team was different from those employees within the green team. Part of the reason for this was that the members of the green team were more engaged in the sustainability programs than employees who were not voluntary members of the green team. One respondent explained,

> To my knowledge I don't know there's ever been training for people outside of the green Team. Like if you are an employee here and you're not a member of the

> green Team, I believe that you're aware that we're green. I'm sure that you know, you see the signs and the trash bins that have been placed out and such and signage, but to my knowledge I don't think there's been training.

Other respondents mimicked the opinion that individuals who were not part of the green team were not as engaged with the sustainability programs, nor did the other employees receive as much training. Data presented in Table 4.11.

Operations

Respondents shared various challenges with the operations of the sustainability programs. I defined the theme operations by the challenges in functionality and operationalization of the convention center sustainability programs. There were six subthemes related to the theme operations including, consistency in operations, program simplicity, tracking progress, turnaround time, program costs, and center size.

Consistency in Operations

Operations were one of greatest challenges to the convention center sustainability programs. Respondents saw program coordination and maintaining consistency in organizational protocol as tricky. For example, if a staff member accidently left one of the back loading dock doors open, heat or cooling could be lost quickly. The example was further explained by a respondent,

> If they don't close that dock door, there goes your energy savings. Everybody affects it because if they don't care that the door's not closed and it's zero out and the heat is on, so it's always on because the doors are open, there's no way that you can save money like that.

Respondents said that teaching the staff and more importantly visitors (who did not spend much time at the centers) about the operational practices was an ongoing challenge.

Table 4.11 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Challenges of Education, Training, and Awareness

Dimensions (bold), Themes (italics), Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Challenges	Defined by the challenges to both program development and ongoing implementation of the sustainability programs
Education, Training, and Awareness	
Ongoing Internal and External Messaging	• "Continuing to educate the public, continuing to educate the contractors, educate the people-- how important this is. Always kinda stress it.... Your people, they need to be reminded because our attention span is only so much. So just have little reminders there and, they'll be like okay." • "We post things on bulletin boards internally for staff. We have signage everywhere about our LEED Certifications. We have a display that's in the building that talks about LEED and all of our different certifications and helping the environment… We have signage in all the bathrooms that talk about our LEED programs. You know, postings or emails. We have a company communication board that's electronic that's by all of our timeclocks and we may communicate stuff over that. I think it's just a combination. Sometimes when we hold, our quarterly meetings, we may, verbally discuss the sustainability or what's going on or might have a presentation on it.
Consistency in Trainings	• "Training is constant, and I think that's another thing we made a mistake with, that we did our initial training, walked away from it, and realized, "Oh, shoot. That don't work." This has gotta be a constant thing. So I think once we understood that, we put the physical barriers in place. We did the training. We committed certain people to docks and what goes in and out of our compactors. We worked with our vendors as far as additional training."

Table 4.11 continued

Dimensions (bold), Themes (italics), Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Frequency in Trainings	• "One to two times a year" • "department specific" • "as needed" • "daily" • "ongoing" • "constant" • "quarterly" • "monthly" • "sporadic" • "varies by event" • "throughout the year" • "none"
Outside the Green Team	• "If you are an employee here, and you're not a member of the green team, I believe that you're aware that we're green. I'm sure you see the signs, and the trash bins that have been placed out and such, but to my knowledge, I don't think there's been training.

Simplicity

Another operational challenge was to make the sustainability program easy and digestible. “Just make this really simple, and accessible, like here's some really easy stuff that you can do.” If attendees or staff had to walk a long distance to discard a recyclable item, they would likely instead choose to throw it in the closest waste bin. Signage and the sustainability message had to be simple and relevant yet detailed enough that individuals understood. Sustainable practices could take more time to implement. For example, it took more time to sort recycling from the regular waste stream than it did to throw everything in one waste bin.

Tracking Progress

Showing numbers, progress, and creating detailed reports regarding sustainability could all be challenges. It was difficult to measure social, institutional, and in some cases environmental sustainability. One example of a challenge in environmental sustainability was that paper did not weigh as much as glass, so even though a lot of paper was recycled, because it weighed less, it did not make as much of an impact in diversion rates. Another example related to size of the center and the impacts of employees. “It's easy to go and talk to everybody, but actually having the change occur for every single employee is difficult, and then tracking that, and making sure that it's happening, is very difficult.” It was difficult to track the progress of employees and the systems of sustainability within the convention center.

Turnaround Time

When things were moving quickly and there was pressure to get a job finished, some employees would not participate in sustainable practices in order to move forward more quickly. When there was little time between events, many employees felt that separating recyclable and donation items was an unrealistic task. This was not only something that individuals found a bit embarrassing but also something that they felt was inevitable. My field notes also discussed my personal experiences working in the event industry, acknowledging the difficulties of the changeover period between events. People are running around, trying to get things in trucks, tearing down exhibitions, separating the items that belong to the center versus items that have to be removed. The process is many times hectic, intense, and fast, making it difficult to pause and consider sorting items to reuse or recycle.

Program Costs

Respondents discussed cost as a challenge to sustainability programs. Some of greatest costs were sustainable purchasing choices, for example solar panels (which may take 20 years to pay off), or through upgrading existing equipment such as lighting fixtures or low flow toilets. With technology frequently growing and changing, there were tremendous financial costs to keeping centers up-to-date. Respondents frequently discussed how the more advanced their programs became, the more challenging it was to continually think of new, fresh ideas to move their programs forward that did not have high costs associated. The more advanced a sustainability program became, the more stringent the requirements for higher certifications and the higher the cost.

While costs of upgrades were significant, the other major cost was labor, since the programs required more labor hours or staff for sorting, training, overseeing, etc. Labor costs were not always obvious between departments. The second quote in Table 4.2 pointed to a couple of fundamental challenges, first that the cost of compostable silverware was so substantial that the onsite partner at the center did not choose to purchase it. Second, there needed to be a cost-benefit analysis of the differential between the costs of compostable silverware versus the staff time to separate the regular silverware from the compost. In that case, one additional challenge was that the onsite partner's budget was separate from the center's budget, so the question boiled down to which department would take the brunt of the additional cost. Would the onsite caterer pay the additional cost for compostable flatware or would the convention center pay for additional staff members to sort out the compost?

Center Size

Respondents generally felt that the size of the convention center influenced or impacted the sustainability programs. Some said that size created a more challenging environment (e.g., the larger the center, the more difficult a program is to implement). Others felt that size made sustainability program implementation easier (e.g., more staff, more financial resources). In discussing the aspects of size, and reviewing maps of the centers with employees, it was not uncommon for them to discuss walking long distances (i.e., ½ mile) to reach their car, or to travel to the other side of a building. Some employees felt that the size of the centers was not a challenge, because the centers had more money, resources, and support for the sustainability programs. Other respondents

felt size did not impact programs or did not feel strongly one way or the other.

Respondents suggested that the larger the venue, the greater the impact overall. For example, they had more physical and financial resources, diverted more waste, hosted more events, and had more staff to support sustainability programs. Interestingly, they supported the notion that larger centers had more physical space for guest education and to showcase sustainability efforts. Conversely, respondents also suggested larger facilities created difficulties such as track and managing more staff, with increased workloads and larger distances to cover. There was also evidence the actual venue size may not be have been as important as the show size. For example, if large centers were to frequently host small shows, the shows could be easier to manage than large centers hosting larger shows. Respondents also suggested that larger venues created sluggish employees due to travel times between buildings. There was also concern with larger venues, staff were more difficult to supervise due to the large volume of part-time employees (who need direct management), and managers cannot directly supervise multiple areas or buildings of a center at one time. Large buildings could also make lunch break departures challenging; travel time between areas took time and resulted in less actual work time. Finally, respondents added that larger venues had more room to be leaders or failures. Data are presented in Table 4.12.

Understandings and Usage of Sustainable Practices Beyond the Workplace

Most respondents applied their understanding of sustainability in their everyday lives. The dimension understandings and uptake of sustainable practices beyond the workplace was characterized by employee use of sustainable practices outside of their

Table 4.12 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions Regarding Challenges of Operations

Dimensions (bold), Themes (italics), Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Challenges	Defined by the challenges to both program development and ongoing implementation of the sustainability programs
Operations	
Consistency in Operations	• "When we raised or open up the big roll up doors in the back of the exhibit halls… they will lose all of their volume out of there – usually in about three minutes – 100 percent of all air out of the door… So how do you fix that? How do you stop that? Well, how do you stop that is anytime the doors are open, I've got door contacts that shuts the air handlers off. If you want heat out there, close the doors. If you close the doors, then I'll turn the air handlers back on again. That was good for about $200,000 a year."
Simplicity	• "I would have to say keep it simple. You have to understand that we have every level of employee here that you could possibly imagine. We have the people that walk around and pick up trash. We have the people that all they do is set chairs all day long… and then you have the management team and there's everything in between." • "We've evolved to the point where we had on the side of the cans it was bottles. Wasn't quite getting through. It was getting through, but not as much as we would've liked. So recently, over the past year and a half, we put the signage on the top. It got better. Now we've gone to putting signs on the wall, right in front. It's one of those things where it's ever changing. I mean, next year we might try to, you know, make it even that much, that much more simple."
Tracking Progress	• "Collecting paper, *(Laughs)* it's so light, you know, it takes us a long time to get any weight on that. That's the one thing that just is a late reward."
Turnaround Time	• "When you're dealing with 100,000 people in one area… stuff starts piling up and you got all these people, then it could be a concern health wise. So you wanna make sure that you using, your head to, get it out of here. We try to do what we can. But sometimes, I'm just being honest, we may not be able to get all because of the demands of the building and where we have to be."

Table 4.12 Continued

Dimensions (bold), Themes (italics), Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Program Costs	• "It all costs money to do. To change out your lightings, I mean, we've spent probably a couple million dollars on changing out lighting to more efficient--'cuz you know sometimes it involves the whole fixture, not just one bulb. All of our water fixtures we've changed out, all of that comes with a pretty good price." • "Lately, I've been having a problem where everything will be compost, but the silverware will be trash. We have to go through all of the compost and pick out the silverware. I asked the manager [of catering]..."Why are you using trash silverware when everything gets composted?" He said, "'Cuz, it costs more to use compostable silverware."""
Center Size	• "Yeah, I would say, our size does matter. It's hard to control people, what they put in our open tops, what they do, what they don't do. Are they making the right decisions? Because you can't walk two steps and see somebody doing something. You're walking half a mile to see somebody do something. And by the time you walk that half-mile, somebody's going to be doing something on the other half-mile that you've got to walk back, and you miss them." • "One percent improvement here has thousands of dollars and hundreds of tons of greenhouse gas impacts. And so, getting that one percent takes some ingenuity, which is where the challenge comes in, because if we're doing it from the electrical system there's something like 38 switchboards, every switchboard has 48 circuits, every circuit has 60-some-odd plugs. So, there's a lot of room for improvement, and a lot of room for failure. But being able to improve those can have a large impact."

jobs at the convention centers. This theme was not directly associated with any of the research questions, but I deemed it important due to the uniqueness of the findings. The themes relating to the dimension included employee definitions of sustainability, focused on recycling, conscious consumption, aligned with jobs, and taught family and friends about sustainability.

Employee Definitions of Sustainability

Respondents had a variety of definitions for the term sustainability. Even though there was variance, six common themes emerged from the collection of responses.

These included:

1. “Recycle, reduce, reuse,” “waste diversion,” “composting,” “reduced consumption”;
2. “Longevity of the sustainability program,” “to continue,” “maintain,” “keep going,” “business survivability” and;
3. “Reduced impact on surroundings,” “positive impact on the world”; “conscious actions,” “cause/affect”;
4. “Awareness,” “sustaining the world for future generations”;
5. “Consistency within programs and practices,” “efficiency,” “improved function”;
6. “Goal orientation,” “accomplishable goals.”

What appeared to be missing from respondents’ understanding of sustainability programs was the social aspect. There was a clear focus on the environmental impacts, with a majority of the respondents identifying recycling, composting, and waste diversion, when

describing the convention center sustainability programs. While identified, very few respondents described social fitness programs or educational opportunities. Other respondents stated that the industry viewed sustainability as a 'sexy' fad a few years ago, but no longer in the limelight as a priority for the event industry.

Focused on Recycling

Most respondents said that they recycled outside of the workplace. Many respondents said that they began doing sustainable practices at home after they had started doing them as a part of their job at the center. Respondents also described how they not only did the practices on their own at home, but they also shared their knowledge with their friends and family as well, in so encouraging others to participate in recycling as well. The following quote explains the use of recycling items, and engaging family in sustainability practices.

> We will take all the papers that we don't use or we don't need, take them down the street. And, and there is pretty much on every corner in my neighborhood, you have a big recycling station that you put clothes in. My girls have a basket full of clothes that they don't wear which we just took Monday, my day off. We just take them over there or either we'll go to the shelter and donate and just give them clothes for somebody that may need it. So that's part of my recycling.

Many mentioned how their homes did not have the infrastructure for recycling, but that they would collect items and then take them to a recycling center. One participant even collected the items from others to help the recycling efforts.

Conscious Consumption

After recycling, conscious consumption was the second most used sustainability practice outside of the workplace. Conscious consumption included purchasing/

consumerism and energy consumption. Respondents said that they made larger efforts to decrease purchasing and when they did make purchases, they focused on local goods, organic food, and sought cost savings. One respondent explained their view of conscious consumerism in simple terms, “I ride the train. I turn my computer off nightly. Don't water my grass very often; as little as possible. *(Laughs)* Eat leftovers. *(Laughs)* I make my kids eat leftovers.” In addition, some respondents said that they were making greater efforts to turn off their lights, use less water, and to decrease heating or air conditioning usage at home.

Aligned With Sustainability in Jobs

Many of the sustainable practices that respondents utilized in the workplace were the same practices that individuals used at home. Respondents explained their view on sustainable practices as “leading by example” and “practicing what I preach.” They indicated that the workplace set a positive sustainability example that then reflected in their home life. A respondent who spent a lot of time at the office but also practiced recycling at home made an example of this point,

> …see, I live it in my office. If you come in my office, you'll see I have a container for plastics. I have it for paper. I do it at home. I live what I practice. You know, I don't just do it because this is what I do for a job. I believe in this, you know?

Respondents identified other practices learned from their workplace, such as composting, donations of clothing and used items to charities, and continuing education in sustainable management. Respondents noted a new awareness and understanding of the lifecycle of items, such as where things came from and where they go went after use.

Taught Family and Friends About Sustainability

Respondents repeatedly told stories about all of the people that they shared their knowledge of sustainable practices. Respondents shared that they educated their family and friends about recycling, conscious purchasing, and energy consumption. They also discussed the changes that they saw in the people they cared for. One employee said that he had been so successful encouraging neighbors and family members to recycle, that he spent his days off collecting recycling from their houses using his truck. Respondents also spoke about how teaching others about sustainable practices allowed them to help others understand their possible long-term impacts on the world. My field notes reflected the surprise that I had in the field after hearing a plethora of stories of individuals who were teaching their communities about sustainable practices. Table 4.13 contains the data from this section.

Conclusion

The findings chapter centered on dimensions that addressed the research questions. The four dimensions in the study were, (1) program development; (2) implementation; (3) challenges, and (4) understandings and usage of sustainable practices beyond the workplace. The findings of the exploratory study were diverse and complex. The first research question asked, how were the convention center sustainability programs developed, as perceived by employees? The programs developed organically with an individual or group of individuals and the support of the general manager. The programs started with easier practices such as donations or cost savings. As the programs developed, more staff became involved, and the centers developed training and protocols.

Table 4.13 Dimensions, Themes, Subthemes, and Direct Quotes of Employee Perceptions of Sustainable Practices Used Outside of the Workplace

Dimensions (bold), Themes (italics), and Subthemes (indented)	Definitions of Dimensions and Representative Quotes
Understandings and Usage of Sustainable Practices Beyond the Workplace	Defined by the employees' understanding and utilization of sustainability practices outside of the workplace.
Employee Definitions of Sustainability	• "Recycle, reduce, reuse," "waste diversion," "composting," "reduced consumption." • "Longevity of the sustainability program," "to continue," "maintain," "keep going," "business survivability." • "Reduced impact on surroundings," "positive impact on the world"; "conscious actions," "cause/ affect." • "Awareness," "sustaining the world for future generations." • "Consistency within programs and practices," "efficiency," "improved function." • "Goal orientation," "accomplishable goals."
Focused on Recycling	• "I even do it at home now. I have people over, I'm like, "What are you throwing away? What are you doing?" They're like, "calm down, man." I'm like, "No, that's recyclable, it's not trash." "You're not at work." "Exactly, I'm at home and I recycle at home, too."
Conscious Consumption	• "I shop at…a local market….you got to support your farmers. *(Chuckles)* I don't know if eating organic counts, if that falls into that." • "I do a lot of data trending, so if I see areas that I think we can save I kind of, I'll tackle it and then trend that, too, so… Yeah, I do it at home… I've got a DTE smart meter now, so I get to have on my phone and I go through and I keep an eye on my – I got a roommate, too, and I'm always bugging him about, you know – I can tell when he leaves the coffee pot on 'cause it'll tell me like every half hour my energy consumption is. So, so I'll let him know, "Hey, either the coffee pot's on or you left the lights on in your room again." And he doesn't really appreciate it, but that's mostly 'cause I'm cheap."
Aligned with Jobs	• "Leading by example." • "Practicing what I preach."
Taught Family/ Friends About Sustainability	• "It's a good thing that we're doing this recycling. I'm glad that I learn it here first. By me learning it here I'm taking it home and I'm showing my two little girls pretty much what recycling is all about, and they're doing it. And they doing the thing at home, too, because I have a recycling—there's a recycling center down the street from me."

Employees pushed back with the changes, but as the programs continued to evolve and employees saw that the changes were permanent, they became more involved. As the programs grew, the centers worked to acquire certifications to help prove the center's commitment to sustainability. Centers B and C hired sustainability managers to help manage the programs and the certification needs. As the programs matured, the stages of ongoing implementation varied from the development stages.

The second research question asked, how are the convention center sustainability programs implemented, as perceived by employees? The sustainability programs themselves tended to be primarily environmental. While many sustainable practices were used by the three centers, the most frequently discussed practices were waste diversion (i.e., recycling, composting, or converting compost to biofuels), resource consumption (i.e., energy and water use), and conscious purchasing (i.e., buying local, recyclable, biodegradable, nontoxic products). Employees were generally very proud of the programs that they had developed. Seeing the growth from nothing was very satisfying. In addition, seeing the waste diversion, helping local organizations through donations, and having a cleaner center were all seen to be great successes.

The act of ongoing implementation of the sustainability programs was dependent on a number of factors. First, all stakeholders needed to be continually reminded about the sustainability programs, educated on the programs, and engaged with the sustainability programs. Sustainability program buy-in from managers and employees were the most important of the stakeholders in the system because they were the ones that did the majority of the work, created new goals and educated the rest of the stakeholders. Acquiring manager and employee buy-in was seen to be the key to successfully being

able to implement the programs. Managers were the ones who trained and engaged the employees and clients. Employees then shared the program with partners, vendors, clients, exhibitors, attendees, and the public. Figure 4.3 included my perception of the systems map of stakeholder interactions. The figure showed that interactions between the convention center stakeholders were complex. However, the figure also showed the top-down relationship of general manager, manager, and employee. Successful programs required buy-in from all three groups. If a marketing director was not passionate about the sustainability program, it resulted in poor communication and training of employees and other stakeholders. Therefore, program buy-in (especially from decision makers and employees), continual education, training, and communication were paramount to stakeholder participation.

To cultivate employee buy-in, respondents explained that employees needed to feel ownership of the convention center, to understand why the sustainability programs existed and to feel like collaborative partners with the sustainability programs. Respondents said that individuals' jobs needed to integrate the sustainability programs. Younger employees tended to be the most excited about sustainability but were a challenging group of employees to retain in the long-term. Respondents did not feel that accountability programs were as important to acquiring employee buy-in as rewards programs.

The third research question asked, what are the challenges of development and implementation of convention center sustainability programs, as perceived by employees? Respondents said that the greatest challenge to the development stage of the sustainability programs was the change in organizational culture. Many employees

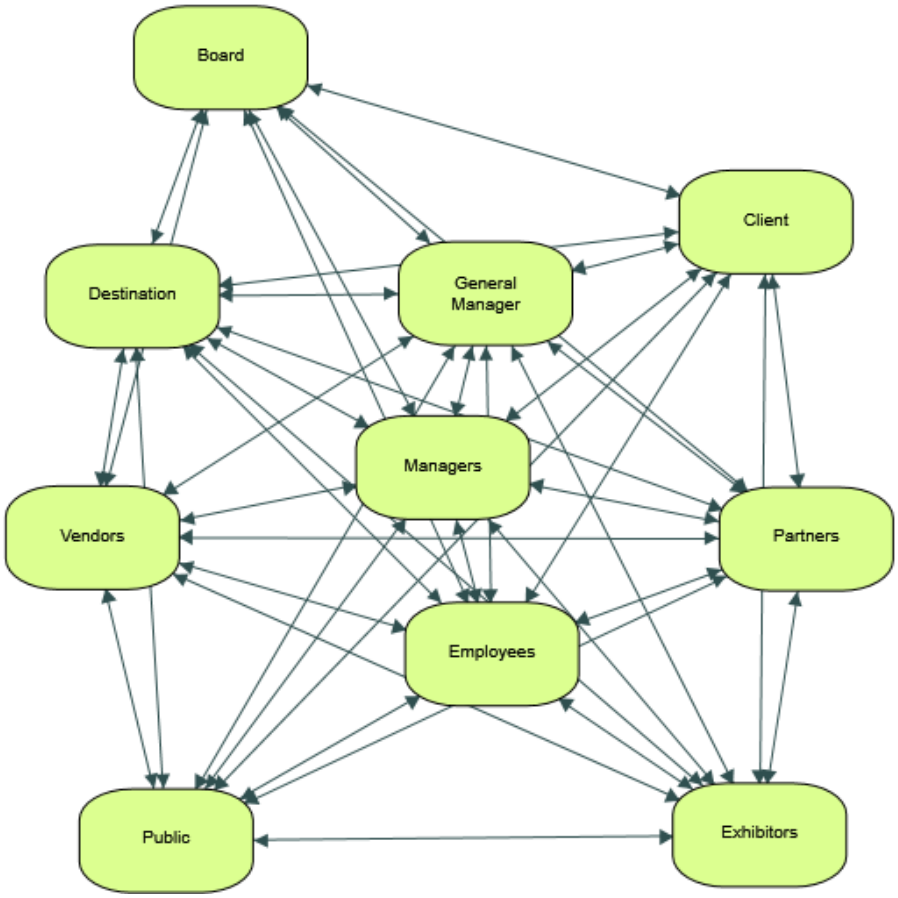


Figure 4.3. Convention center stakeholder system interactions.

struggled with the changes in protocol. To combat the struggle, the convention centers promoted passionate employees to positions of power; this helped to engage other employees. It was also difficult to acquire buy-in from all of the different types of employees because many employees were rarely onsite and trainings required more staff hours, which came at a high cost.

Respondents said that education and training were an ongoing struggle. There were two main types of education and training, education for employees and education for nonemployees. Employees needed constant training and reminders to participate in the program. Respondents also mentioned that there was a lack of consistency in trainings and a discrepancy as to how many trainings the centers offered a year. Respondents at two of the centers said that employees outside of the green team did not get much training on the sustainability program. Nonemployees or clients, attendees and the public needed constant, simple education on the sustainability program as events were regularly changing over so new people were regularly entering the center and needed to participate in the sustainability program. Employee and nonemployee engagement with the sustainability programs affected the operations of the convention center.

Respondents also felt that operations were an ongoing challenge for the convention centers. Operational challenges included maintaining consistent operations (closing doors, turning off lights), keeping the sustainability programs simple enough that people choose to participate, tracking program progress, program costs, and the sizes of the centers. However, some respondents also felt that the size of the centers was as a boon because the centers had more money, resources, and support for the sustainability programs. In addition, respondents stated that it was difficult to participate in the

sustainability program when there was a short turnaround time between events, when they were short of staff and there was a lot of work to complete before a new show entered the center. While there were ongoing operational challenges to the convention centers, the centers still viewed the sustainability programs as successful, as long as there was employee engagement.

The fourth and fifth research questions were integrally linked to one another as part of a spectrum, but ultimately had the same answer. The fourth question asked, what is the role of the employees in the development of convention center sustainability programs? The fifth question inquired, what is the role of the employees in the implementation of convention center sustainability programs? The results of the investigation showed that employees were crucial to the successful development and implementation of sustainability programs. Employees were the ones who created the vision and goals of the sustainability programs. Employees were the ones to ensure policy implementation and the ones to train other stakeholders about the programs. Employees also ensured the happiness and satisfaction of clients. Therefore, respondents saw employee buy-in through positive perceptions, ownership of the center and supportive actions to be the most important facet of successful sustainability programs.

Employee buy-in towards the sustainability programs also played a greater role in communities. Most respondents discussed how they implemented their understanding of sustainability in their everyday lives. Respondents said that they recycled, made conscious purchasing choices, and were more aware of the energy they used. Interestingly, the sustainable practices that respondents said they did at home tended to align with the types of sustainability they regularly engaged with in the workplace. In

addition to participating in sustainable practices at home, they also taught their friends and families about sustainability. Therefore, respondents' participation in the convention center sustainability programs also had greater implications for society.

CHAPTER 5

DISCUSSION

Research on convention center sustainability is relatively new (Draper, Dawson, & Casey, 2011; Park & Boo, 2010). This exploratory investigation utilized a multiple instrumental case study design. The research sought to add to the existing literature by assessing the research questions relating to the development, implementation, and challenges of the sustainability programs within three U.S. convention centers, as perceived by employees. The research questions also sought to better understand the roles that employees play in the development and implementation of the sustainability programs. The research utilized Complex Adaptive Systems (CAS) theory as a conceptual framework. This study defined convention center sustainability as social, economic, environmental, and institutional sustainability.

The discussion chapter was broken into a number of key themes. The initial goal was to describe a holistic view of the investigation, specifically pertaining to the research questions. Then the chapter moved to a narrower outlook on the deeper meanings within the findings related to the complex adaptive systems (CAS) within the development and implementations of the convention center sustainability programs. The chapter then concluded with the larger meanings, the limitations, future research and the significance of the study. CAS theory helped provide guidelines for better understanding the results of

the study, highlighting the understanding that the system is only as strong as its weakest link.

Program Development

The story of each convention center sustainability program began with the developmental stages and the roles of the people who were involved in the origination of the program. The stories helped to answer the first and fourth research questions. The first research question was to understand the development of sustainability programs, as perceived by employees. The fourth research question asked about the role of the employee in the development of convention center sustainability programs.

Self-organization and the Development of Convention Center Sustainability Programs

The convention center sustainability programs developed organically and the stories paralleled Complex Adaptive Systems (CAS) theory. CAS theory stated that systems were ever changing and adapting to new circumstances (Miller & Twining-Ward, 2005). The convention center sustainability programs were complex systems that were constantly adapting to different conditions. One of the key concepts in CAS theory was self-organization, or the facility for systems to generate new structures or to restructure, learn and grow (Meadows, 2008). The development of the convention center sustainability program systems was consistent (Figure 4.1) with self-organization. Over the first few years of efforts to cultivate an organizational culture change, centers learned, grew, and altered their sustainability efforts. The convention center systems had to evolve

to incorporate sustainability for many reasons, some including, competition in the event market, to become more attractive to clients, to save money, efficiency or because they felt that it was the "right thing to do." A challenge of self-organization is that it can create diversity, fluctuation, and unpredictability (Meadows, 2008). New policies, experimentation, and disorder were some of the challenges that organizations could face due to self-organization in organizations (Meadows, 2008). Respondents discussed these concepts when they described the beginning of the programs. One example was when upper managers decided to create sustainability programs and employees initially pushed back. As employees managed the changes in policy, structure and the trial and error stages of the programs, they many times struggled with the changes. Building a culture of sustainability, learning new policies and systems, incorporating sustainability into job descriptions, and buy-in from leadership and management took significant time (Sroufe et al., 2010). Once employees saw that the programs were permanent, felt that there was more order and saw the programs as part of the center's long-term vision, then they felt more supportive of the programs. The CAS theory lens helped to better assess the findings from the research because it allowed me to better understand the functionality of the convention center systems relating to sustainability.

Resiliency and Ongoing Sustainability Program Implementation

The outcomes of the second and fifth research questions built upon the findings of the development stage. The second research question asked, how are the convention center sustainability programs implemented, as perceived by employees? The fifth research question was, what is the role of employees in the implementation of convention

center sustainability programs? As the sustainability programs matured, the ongoing implementation of the programs differed in ease and difficulty.

CAS change with time. An important concept within CAS theory is resilience. Meadows (2008) defined resilience as, "a measure of a system's ability to survive and persist within a variable environment" (p. 76). The ongoing functionality and management of a convention center sustainability program is variable; there are new clients, events, expectations, operations, budgets, etc. Complex systems go through productive states, challenging times, feedback loops (where an action can affect the outcome of a different action), and self-organization (Miller & Twining-Ward, 2005). Respondents shared many stories of the growth, successes, and challenges of the ongoing program implementation. Education, training, and attempts at gaining employee buy-in were ongoing. Respondents discussed how employee buy-in towards the sustainability program, a sense of employee ownership of the convention center, understanding what needed to happen and why the sustainability programs existed, and collaborative efforts among staff, helped the programs to stay resilient. However, if there were a lack of training and education, or employee engagement with the sustainability programs, the employees would be less likely to support the sustainability programs. The system of a successful sustainable program within the convention centers was highly dependent on ongoing education, training, simplicity, consistency, and acknowledgement for work well done.

While managers and employees were paramount to the functionality of the sustainability program systems, they did not exist in a bubble. Managers and employees were constantly interacting with other stakeholders within the convention center system.

The system of the sustainability programs was highly dependent on client needs, local partnerships, and ongoing education of stakeholders. This point is important because the successful programs were not only dependent on the buy-in of employees but buy-in from all stakeholders, which was crucial to ongoing program implementation.

The System of Developing and Implementing Convention Center Sustainability Programs

As previously indicated, there were no definitive lines between the program development stage and the ongoing implementation stage. Most respondents stated that they felt it took about 3 years for their sustainability programs to mature; however, there were many similarities between the two stages. The key findings related to both the development and implementation aspects of the sustainability programs paralleled the research from Ventriglia and Rios-Morales (2013). They argued that successful sustainability programs were dependent on three things: 1. Stakeholder buy-in; 2. A simple, consistent, relatable definition of sustainability, 3. Educational programs on the values and benefits of sustainability for businesses and consumers. The second section of the discussion chapter was broken into three sections that incorporated answers to the research questions, the similarities to the findings of Ventriglia and Rios-Morales (2013), and CAS theory. The first section concentrated on definitions of sustainability, communication, training, and education. The second section focused on stakeholder buy-in in the convention center sustainability programs. The third section incorporated exogenous convention center characteristics such as environmental programs, certifications, convention center size, and sustainability program costs.

Definitions of Sustainability

The event and convention center industries have traditionally framed sustainability as an environmental, and minimally an economic concern. Makower (2009) identified "one of the big problems companies confront when they set out to devise, implement, and communicate their green strategy is that there is little agreement about what it means for a company to be seen as green" (p. 18). Makower (2009) suggested that the media, consultants, conferences, websites, and blogs have all depicted a different picture of a responsible business, ultimately arguing that, "…the definition [of a sustainable business] remains in the eye of the beholder" (p. 18). This was true in the context of the three convention centers, where employees all had different definitions of sustainability.

The interviews showed a lack of consensus regarding definitions of sustainability at all three centers. Many respondents defined sustainability as recycling, reducing, and reusing. Others focused primarily on the environmental aspects of sustainability. The results were consistent with the research stating that there are few industry-wide standard sustainability definitions, forcing organizations to define sustainability for themselves (Makower, 2009).

Some of Center C's respondents provided more consistent definitions of sustainability. Respondents and their website explained that they had consciously decided, as a county, to define sustainability as "to sustain the convention center." At first glance, the definition appeared to be primarily economic. However, as the respondents explained the greater meaning of the definition, it became clear that they focused on client needs and the ability to stay competitive in the industry, which incorporated

environmental practices. The definition was nebulous enough that there were many ways of understanding the definition. For instance, to sustain the convention center could also mean that the well-being of the employees of the convention center needed to be included. Therefore, of the three centers, they were the closest to having a clearly defined use of the term sustainability. However, not all employees offered the same definition and of those who did, few described the definition as more than environmental. This finding helped to describe not only the importance of definitions but also all communications regarding a center's definition of sustainability as it trickled down to affect the rest of the center.

Existing literature found that consumers only trusted buzzwords such as "green," "eco," "responsible," and "sustainable" about 10 % of the time (Futerra Sustainability Communications, n.d.). This showed that it was not only harder for centers to stand out because of their sustainability practices, but they also had to fight against consumer oversaturation of terms in order to prove their genuine commitment to sustainable practices. If few event planners and organizations believed in sustainability claims, because of the overuse of sustainability nomenclature and event planners viewed sustainability as a fad from the past, then there would naturally be less demand for sustainability in the convention industry. Individual centers and the industry as a whole need to develop strong, industry-wide accepted definitions of sustainability so when convention centers describe their programs, the industry will understand.

The greatest challenge with the lack of agreed upon definitions of sustainability was the ways in which they affected the rest of the system. If a convention center limited their definition of sustainability to environmental practices, then they were not able to

give themselves credit for the social, economic, and institutional practices that they had in place. In addition, the lack of consensus regarding sustainability definitions affected the sustainability program communication through marketing, sales, trainings, and educational practices. If a manager or employee were unable to communicate their understanding with a client, it could affect their recruitment strategies, the client's understanding of sustainability and the ways in which other stakeholders understand sustainability.

Sustainability Was Job Dependent

By limiting the definition of sustainability to environmental practices, convention centers limited the number of employees involved in the sustainability programs. Respondents said that engineers, electricians, and housekeepers interacted with the sustainability program every day, whereas security, the set-up crew, and technology services were seen to have little interaction with the sustainability program. This view of employee engagement was highly dependent on the ways in which a center defined sustainability. The outlook on a sustainability program did not include a systems perspective where technically everyone is a stakeholder to the long-term well-being of the center.

Minimal Focus on Social Sustainability

While it was not included as part of their definitions, many respondents discussed forms of environmental, institutional, and sometimes economic sustainability. Few respondents mentioned aspects of the sustainability programs directly related to social

sustainability; however, they did exist. All of the centers had policies regarding onsite smoking, corporate social responsibility (CSR) programs, staff retention, health insurance, sick leave, and community engagement/local partnerships. Two of the centers had staff education such as cooking classes, fitness courses, and healthy living classes. One of the centers had access to workout facilities and phones with step counters to encourage employees to exercise. If the centers were to expand their definitions of sustainability to include the social components of their programs, they could have given themselves more credit for the work that they had been doing and would have had more to publicize.

Practices at Home Aligned With Jobs

Respondent at-home sustainability practices aligned with their jobs and their view of sustainability. If an individual was an electrician, they were more likely to be aware of their energy consumption at home. An important insight from the study was that most respondents were continuing to participate in sustainability practices when away from work. The respondents were also making efforts to teach their family and friends about sustainability practices. When sitting down to assess the potential for change, the impact that 200 full-time and up to 1800 part-time or temporary employees could have on a community is immense. Staff education affected the ways in which they saw sustainability outside of the center and encouraged positive change.

Education and Training

Training and education were one of the best ways of engaging stakeholders but came with unique challenges. Throughout the interviews, respondents discussed the importance of training. There seemed to be two distinct areas of training: the training of employees and the training of nonemployees or clients, attendees, and the public.

Training Employees

The largest challenge regarding employee training was the inconsistencies: the shared rhetoric with employees and the frequency of the trainings. No one seemed to agree on the frequency of the sustainability trainings or the content discussed in the trainings. Many respondents felt that there was not enough training, or they did not know what other departments were doing (not enough cross training). When asked how frequently employees were trained, answers varied.

Based on discussions with respondents, this inconsistency was due to the following reasons. First, involvement in sustainability varied by type of department and job. Managers varied in their passion for sustainability programs. Respondents said that trainings varied by the department's relevance to the sustainability program. The departments were seen to be varied in their relevance to sustainability trainings. In addition, centers may have been seeing sustainability as an integrated part of the operational system, and not separately identified as "sustainability." Hence, while it may not have be called "sustainability," employees were educated on the concepts. Third, if education on the sustainability programs was expressed "on-the-job" and through "word-of-mouth," then trainings may have been dependent on the passion of the individual

providing them, leaving some to see training on the sustainability program to be “as needed” or unimportant, instead of regular, official sit-down trainings required by all employees. However, regardless of the reasons, the lack of consistency in trainings seemed frustrating for many employees, who also frequently identified a lack of understanding of reasons for sustainability policies.

Chernan and Jacob (2012) found that to overcome challenges in employee buy-in and organizational change, employees needed training and to be empowered to create change. Haines (2000) discussed communication effectiveness, stating that the average person has to hear communication about changes that impact them four times before they actually hear and understand it. Facilitation of sustainability programs became easier with time, especially once incorporated into job descriptions and new employees understood that it was part of their new job.

Poor Communication

The second greatest ongoing challenge was poor communication. Some respondents complained of not understanding the sustainability program or why the program existed. This may have been because a person cannot easily support (a program) that they do not know about or understand. These findings were supported by Willard (2009), who said that extensive communication regarding planned organizational culture change, improved operations and business outcomes, and external rewards could motivate employees to support sustainability programs. The respondents who reported not knowing about the program did not care about the program or make the sustainability program a priority. This supported the previous finding that the more training, education,

and awareness a person has about the program and the impacts of the program, the more buy-in.

Communication Versus Education

As expected, internal communication and employee education within sustainability programs differed. Communication on sustainability programs primarily took two forms, through meetings and signage. Haines (2000) discussed communication effectiveness, providing a hierarchy of communication forms based on retention of the understandings. Individuals retained 90% of the information that was explained as something was occurring such as one-on-one conversations; the next most successful forms of communication were "two way" interactions including small group and large group conversations (Haines, 2000). More impersonal forms of communication such as flyers and news items was the least effective forms of communication (Haines, 2000). Respondents said that there were a number of different types of education and training programs. They identified their education and training occurred through word-of-mouth, new employee trainings, and through annual all staff, departmental and small group meetings.

Accountability and Rewards

Respondents discussed accountability and rewards in the interviews. Since the three convention center sustainability programs assessed in the investigation all had mature sustainability programs, the centers had had more time to integrate the sustainability programs and policies into employee job descriptions. In terms of

accountability, the interviews showed that the managers were generally the ones held the most accountable for employee participation in the sustainability programs. Therefore, involvement from managers could also affect the outcomes of one's job.

Most respondents did not feel they were directly accountable for the sustainability program. Instead, the convention centers treated implementation of the sustainability program like any other aspect of their job; employees who did not participate in the programs and policies could be written up and fired. Ultimately, accountability and implementation are up to managers who had to ensure that the programs are succeeding and that employees are participating.

Rewards seemed to be more impactful for respondents than accountability practices. Respondent described tangible rewards in the form of special lunches, parties, gift cards, or cash as "nice." Respondents viewed tangible rewards as "icing on the cake" but did not make respondents feel acknowledged or motivated to participate in the sustainability programs. The extrinsic rewards that were most meaningful were verbal or written praise from managers or the general manager. Respondents who had received recognition tended to feel more connected with the sustainability program, their job, and the center and motivated to propel the programs forward. Intrinsic gratification (e.g., doing the right thing by participating in sustainable practices) played a role in helping respondents feel motivated to continue their participation in the sustainability programs; receiving acknowledgment seemed to make a larger difference. The results on reward systems were supported by the research by Chernan and Jacob (2012) who stated that reward and appraisal programs play an important role in the successful implementation of organization sustainability programs.

Simplicity

Program ease and accessibility was also a theme. Wirtenberg, Harmon, Russell, and Fairfield (2007) stated that sustainability programs needed to be easy to use, allowing employees to consistently enhance their competencies. Developing safe avenues for participation, sharing, and feedback were important to the respondents, supporting the findings from Gates (2004).

Training Nonemployees

The second aspect of training was ongoing training of nonemployees. The respondents found ongoing training a frustration both because it never ended and because nonemployees affected the waste diversion rates (of centers A and B). Many respondents stated that they felt their signage was a successful education tool and that they had acquired the greatest nonemployee buy-in when employees helped teach others through hands-on education such as employees standing next to waste bins, ensuring that items were discarded in the correct bins. The challenge with nonemployees was creating clear, ongoing education about their program for people entering the center for short to long periods.

Stakeholder Buy-In

The findings of this research were consistent with Ventriglia and Rios-Morales (2013) who discussed stakeholder buy-in to sustainability programs as one of the three actions required for successful sustainability programs. Program successes were dependent on stakeholder buy-in during both the development and implementation stages

of the sustainability programs. There were four main types of stakeholder buy-in. First, the buy-in of the general manager, upper management, the board, and the destination who were key to ensuring that sustainability programs were developed, funded, and marketed. Second, the buy-in of direct (managers to lower level employees) and indirect employees (employees of partners and vendors working at the convention center) during the development and implementation stages, because they were the ones who upheld the programs. Third, client buy-in, the centers were driven to please clients. If the clients supported sustainable practices, then the managers of the convention center would work to meet those needs. Fourth, all other stakeholders (attendees, exhibitors, and the public) who needed constant, simple education and training due to the ever-changing nature and turnover of the event industry. All of the stakeholder groups played important roles within the convention center and acquiring positive perceptions and buy-in were paramount to program success.

Decision Maker Buy-In

Decision makers played a large role in the development of the sustainability programs. Programs began with support from the general manager and soon after, support from the convention center managing board. The same support was necessary from the destination. Once the centers began the sustainability programs, they required the support, financial aid, and guidance from the destinations. Ultimately, the three convention center sustainability programs were only successful because of the support they had acquired from the destination, the convention center managing board, the general manager, and the directors/ managers under the general manager. Sroufe (2010)

discussed the need for management support when starting a sustainability program. Gates (2004) added, “In order to gain employee buy-in, foster a productive work environment, and build sustainability, leadership must exemplify and communicate the company’s core values” (p. 499). The results of the study showed the importance of management support for programs, as it was the leaders who helped to motivate employees. The results of the interviews explained the trickle-down effect of the sustainability programs.

Employee Buy-In

Unterkofler and Simons (2014) found that convention center employees were the most significant stakeholders for convention center sustainability programs. The results of this study support Unterkofler and Simons’ (2014) findings. Employees were fundamental to the development and implementation of sustainability programs. Employees physically implemented sustainability programs and employees were essential to program victories. Park and Levy (2013) found that employees who had bought into the sustainability programs had stronger organizational identification. This research supported Park and Levy’s finding and showed the reverse, that knowledge, empowerment, and ownership also led to employee buy-in and positive perceptions towards the sustainability program. These results mimicked Gates’ (2004) ethical commitment process. For sustainability programs to be successful, employees needed sufficient education/training, development, ongoing awareness, and good communication. One way that the centers ensured that employees were passionate about sustainability programs was through hiring individuals who had an interest and background in sustainability prior to employment. Another way of helping to engage

employees was through promoting employees who had a passion for the sustainability program.

The Power of Passionate Employees

One way of successfully supporting the convention center sustainability programs was to empower employees who were passionate about the sustainability program. When an employee was excited and passionate about the sustainability program, they received a promotion to a lead position. This finding was telling for ways in which convention centers can better engage employees in their sustainability programs. Empowering passionate employees helped the employees to feel more ownership of the convention center and helped them to further buy into the sustainability program. By modeling passion and enthusiasm, the empowered employees helped to motivate other employees to want to make their own positive impacts. The empowered employees also encouraged positive group synergy among co-workers. Respondents described empowered employees as happier, harder working, and more motivated.

Lack of Employee Turnover

Lack of employee turnover was a trend among the interviews. Centers said that if anything, they needed more employee turnover to get ‘fresh blood’ into the organizations. Many employees at the centers have worked there for 15 to 35 years. After working over 20 years in the industry, one general manager said, “You know, what’s interesting, is that these aren't jobs, these are lifestyles. It is better than a real job.” While that positive outlook may have held true for many positions, there were a couple of areas with higher

turnover. Younger, more educated employees were more likely to leave a job if provided a better offer; they were not as loyal to their employer as older, less educated employees. Research on the millennial generation supported this finding (Lu & Gursoy, 2013). The other area of higher turnover was for less desirable positions such as housekeeping where individuals cleaned toilets and managed compost.

Younger Generations

Respondents said that younger, more educated employees were more likely to buy into sustainability programs. This finding supported Simons and Unterkofler (2015) who said that younger, more educated employees were generally more excited about participating in sustainable practices than older employees. Results also identified that younger, more educated employees helped motivate older employees' engagement in sustainability programs.

Changing Organizational Culture and Employee Buy-In

There were two primary challenges recognized by employees' involvement in the sustainability programs. Sroufe et al. (2010) found that organizational change and employee buy-in could greatly hinder the success of sustainability programs. The findings from this investigation mimicked Sroufe et al. (2010) who found that changing organizational culture to incorporate sustainability was a challenge for a number of reasons. The research found employees to be set in their ways; they thought that the policies were just a passing trend, and/or they did not understand the purpose of the program. Willard (2009) supported this by saying that employees were too smart to buy

into changing management fads.

Unions, Contract Workers, and Vendors

Many respondents said that unions, contract workers, and vendors were an ongoing challenge to daily operations and implementing sustainability. In some cases, union workers were convention center employees. Respondents described newer vendors as easier to work with than older vendors who were not as flexible. Union workers, contract workers, and vendors did not receive as much training on the sustainability program. Obtaining initial buy-in was the most difficult for these employees. The greatest challenge was the "catch-22" of the ongoing high costs of training and worker hours while insuring that the needs of the sustainability program were met. With centers already losing money in operational costs, additional labor hours add a tremendous expense to organizational financial well-being. The lack of training led those staff members to be unaware or uninterested in the sustainability program. Those employees are difficult to manage and to hold accountable for the program. Therefore, respondents viewed that there was no easy answer to training and management of union, contract workers, and vendors regarding cost, training, and accountability for the sustainability programs.

Client Buy-In

Client buy-in took two forms. First, certain clients required convention centers and sometimes the entire destination to use sustainable practices before agreeing to plan events in the area. Those clients were seen as few and far between, which supported Unterkofler and Simons (2014) who found that less than 20% of clients asked about

sustainability during the planning process. This research showed that few clients required sustainability to host events at a center. However, clients who did require sustainability made large impacts; these clients had already bought into the concept of sustainability and helped to motivate centers to utilize sustainable practices.

The second group of clients who had to buy into the programs were those clients not inherently invested in sustainability. Unterkofler and Simons (2014) also found that many clients did not utilize the services offered as part of the sustainability programs such as sustainability reports and weighing waste. This research also supported those findings. Many clients of the convention center were not greatly motivated to incorporate sustainability into their events. Therefore, as others found (e.g., Draper, Dawson, & Casey, 2011; Park and Boo, 2010; Sox et al., 2013), cultivating client buy-in to sustainable practices was an ongoing challenge for the industry and the individual convention centers.

Sustainability as a Passing Trend

An ongoing theme throughout the interviews was the concept that the convention and event industry had viewed sustainability as a passing fad. One manager said, “I don't think meeting planners give a flip [about sustainability]. In my perception, I think that what meeting planners care about is that the issues and needs of their clients are met by the venue that they are evaluating.” Other managers spoke of similar sentiments; feeling that organizations and meeting planners have been showing less interest in sustainability. In fact, a couple of the centers offered free services such as onsite weighing of waste, compost, and recycling or postevent sustainability reports and found that few clients were

interested in such services. Generally, respondents explained that clients wanted convention centers to use sustainable practices, but they did not want to have to pay for it. Recently, conventions, expos, and trade literature on conventions and event planning have been increasingly changing focus from sustainability to enhanced technology (e.g., increased Wi-Fi speeds) and security.

Attendees, Exhibitors, and Public Buy-In

Each convention center continually worked to engage attendees, exhibitors, and the public with their sustainability programs. Respondents stated that sustainability programs were no longer optional. This finding aligned with Lee, Brieter, and Choi (2011) who argued that conference attendees wanted to see sustainable practices and that sustainability had become a prerequisite for successful events instead of simply an option or ethical choice. However, respondents said that for the most part, clients and attendees did not want to pay extra for sustainable practices. This finding differed from Sox et al. (2013) who found that most attendees were willing to pay a higher event entry fee if the staff at a convention center were educated about sustainable practices. Respondents added that, generally, attendees were excited about participating in sustainable practices. An example was that some events hired convention center staff to educate attendees about waste diversion. Interestingly, respondents explained that attendees wanted to separate items themselves instead of simply handing a staff member a tray of items for separation.

Exhibitors were generally less motivated to participate in the sustainability programs, so getting exhibitor buy-in was more challenging. Many times, exhibitors left

the most waste behind. Respondents discussed ways in which they had inadvertently transferred costs to exhibitors in so cutting down on costs and energy usage. For instance, if an exhibitor wanted to use faster internet, more power, water, or convention center staff, they would have to pay for the additional cost. While many exhibitors were willing to pay the fees, not all wanted to spend extra money so limited their consumption. The lack of exhibitor buy-in may have been because exhibitors wanted the freedom to do whatever necessary to acquire business. Unless the event had a sustainability focus, exhibitors would likely want to put on a large show and would create over-the-top exhibitions to catch the eye of attendees. Exhibitors also had unique differences from attendees in that they required shipments to receive at the centers; they tended to consume more items or bring more items with them to an event and many exhibitors left a tremendous amount of postevent waste behind. Engaging exhibitors was as an ongoing challenge and there has generally been little focus on exhibitor buy-in on sustainability practices in the industry.

Respondents and news articles used for the study provided positive feedback regarding the public's view and support for the convention center sustainability programs. Essentially, the public had no reason to dislike sustainability programs. By implementing a no idle policy for trucks, there was less exhaust flowing into neighboring windows around the center. By diverting waste from the landfill, decreasing water, and energy consumption, more resources were available to the communities. In addition, respondents said that public citizens who had interacted with convention center volunteers or who had visited the convention center were more positive and proud of their community's center because of their commitment to sustainability.

The System of Stakeholder Buy-In

The various convention center stakeholders interacted as part of a system. As alluded to above, sustainability program buy-in was greatly dependent on the buy-in of other groups. For instance, decision makers such as a general manager were more likely budget for sustainable practices if there was client demand. If the decision makers supported sustainability programs, the staff were more likely to support the sustainability programs. If the managers and staff had bought into the sustainability programs, they were more likely to teach the clients, attendees, exhibitors, and the public about their sustainability programs. If a client had never experienced sustainability until they hosted an event at a venue with a successful sustainability program, they may have been more likely to look for sustainability in the future. The staff who had bought in were also more likely to bring the practices home and taught their family and friends about sustainability. Therefore, it is imperative that assessment of buy-in is through a systems lens of stakeholder interactions and engagement, as the buy-in of the different stakeholder groups is dependent on other stakeholders.

Exogenous Factors

The sustainability policies discussed by respondents were similar to Davidson and Rogers (2006) who said that the most common sustainable practices were cost savings, conservation of natural resources, and reduced use of water and energy, as well as recycling. Key issues addressed in sustainability policies were primarily environmental. Almost all of the respondents interviewed mentioned waste diversion as a primary focus in their interviews; this finding was also consistent with Park and Boo (2010) who

studied suppliers, event managers, and attendees. This may have been in part because waste diversion is more visual than other sustainable practices. The following section discussed program benefits, program costs.

Operations

For operations, creating systems of sustainable practices was an ongoing challenge. Respondents discussed many frustrations regarding things not easily rectified. For instance, when there is fast turnaround between events, sometimes respondents felt there was no time to recycle or compost. Hiring more temporary staff was expensive and hard to justify when most centers already lose money in operational costs. Therefore, there were no easy answers for event turnover management regarding staff hours required for implementation of the recycling/compost programs, and convention center financial viability. In a similar vein, some things were not recyclable, but were required for safety, such as duct tape or gaff tape, used to tape loose cords down for safety. Another challenge was the cost of recycled or biodegradable products. Until there is higher product demand and costs begin to drop, organizations will likely have a difficult time justifying the extra cost associated with items that appear to be sustainable. Throughout the interviews, I kept wondering about the lifecycle of "sustainable" purchasing. One of the participants who regularly changed lightbulbs told me that since they had changed to LEDs, lightbulbs went out more frequently. Without studying the system and the lifecycle of purchases, it is sometimes difficult to know if a sustainable product is worth the additional cost, especially when there were other uses for the money, like additional staff hours for education on the program. While the convention industry was doing their

best to change, there were some inherent challenges in the system such as fast turnaround times between events, unrecyclable items, and costs of recyclable or biodegradable items.

Complex Situations Made for Complex Sustainability Programs

Interviews helped to shed light on the interrelated systems of environmental, social, economic, and institutional sustainability within the convention center systems. For instance, there were significant cost savings for not using HVAC systems on nonevent days. However, staff members complained about working in intense temperature extremes. Due to uncomfortable temperatures, some staff avoided the loading docks unless it was necessary because they were uncomfortable in the heat or cold. In this case, the CAS theory helped to understand the complex situation. The centers wanted to save money and energy on nonshow days, yet such practices sometimes led to staff not complying with sustainability policies (such as waste diversion) because they wanted to avoid uncomfortable areas at the centers. Research has provided many examples of the ways in which the facets of sustainability interact with each other. However, without regarding sustainability as a system of components that include environmental practices but are not limited to environmental practices, it was difficult for the convention centers to weigh cost and energy use over employee comfort.

Cost

Turtle (2008) argued that event sustainability measures were not complex or expensive. The results of this study showed otherwise. Sustainability in events proved to be a complex topic with many interconnected aspects. Interviews also displayed how

sustainable practices were both expensive for event venues and could also be costly for organizations hosting events. Some managers spoke of ways in which they offset the cost of sustainable practices by having clients pay. An example was clients who wanted center employees to help attendees throw waste in the correct bin. The more advanced the convention center sustainability programs became, the greater the cost. While the initial goal of the programs was cost savings, there were many items that had a large upfront cost and an eventual payoff or cost saving. Examples included energy and water efficient dishwashers, solar panels, onsite herb gardens, and upgrades to the center. However, most respondents said that the sustainability programs lost money in operational costs. Recycling, composting, purchasing recyclable or biodegradable items, and training staff on the sustainability program all had costs, that while seen as the "right thing to do," lost the convention center money regularly.

Center Size

Size also affected the sustainability programs and the employees. Larger venues required more resources, work, staffing, and have higher costs to maintain. Center size made it more difficult to leave the workplace. When a parking space was one-half a mile away, it was difficult for employees to leave for lunch. Walking between buildings could also be a challenge. The centers used bikes and Segways as alternative ways of transporting employees around the centers; however, not all staff had access to a bike or Segway. When staff spend a significant amount of work time traveling between spaces, it wastes labor hours. While some respondents felt positive about the convention center sizes, it did prove to be an ongoing struggle for management of lazy or uncommitted staff

members. Building size has not yet been a topic of convention center or event literature, yet building size had major repercussions.

Certifications

Another aspect of sustainability program planning was the choice of certifications available. Managers discussed the benefits of acquiring certifications: certifications enhanced operations, lured potential clients, and provided framework for their sustainability programs. They also said it could be difficult to decide on certifications and certification levels. One manager spoke adamantly against LEED certifications based on previous bad experiences, while another said that they felt there was no value in acquiring a second level of APEX/ASTM. Center managers felt clear as to the reasons that they had acquired their specific certifications but also spoke about the challenges with choosing certifications in the industry, which supported the findings from Strick and Fenich (2013).

Industry certifications have the potential for incredible change. Organizations that seek certifications create changes to acquire the certification. Yet, few to none of the indicators used in the certifications available to the event industry incorporate institutional or social sustainability. This was an area of the industry that needed change. Certification organizations must start assessing sustainability as a system instead of a series of unrelated indicators. By broadening their view of sustainability, certifications would be able to encourage event venues and events themselves to also view sustainability from a broader perspective.

Benefits of Programs

Throughout the interviews, respondents said that sustainability was "the right thing to do." This finding mimicked Swarbrooke's (1999) ethical dilemmas stating that some individuals and organizations participate in sustainable practices because it was "the right thing to do." However, despite the feel-good aspects of the sustainability programs, the convention centers touted many benefits to the sustainability programs ultimately saying that their efforts were "worth it." Some of the benefits discussed by respondents were cleanliness of the center, increased employee satisfaction, improved operations, and cost savings. Perhaps one of the greatest takeaways from this research was that the sustainability programs were not only viewed as "the right thing to do," but they made individuals feel good, helping to justify the extra employee efforts.

Future Research

This study opens a range of future research concepts to understand sustainability programs in convention centers. Based on my findings, I recommend that further research studies assess the types of training programs available to employees in convention centers. Secondly, following employees from program development through to implementation longitudinally would provide further insights into the process as well as the attributes leading to employee buy-in and positive perceptions towards sustainability programs. In addition, understanding the role that sustainability leadership plays may be an important contributor to employee buy-in. Additional research on the influence of generational differences among employees with respect to sustainability and technology may also help understandings of employee buy-in as well. Future research could also

assess how managers choose certification programs. Finally, while the focus of most convention center sustainability programs is environmental and economic aspects of sustainability, understanding the lack of social and institutional aspects of these programs warrants additional research. Another area of research is the impact of the perceptions of stakeholders associated with sustainability programs and how stakeholders affect program outcomes and supply chains. As safety and security increase in importance around the world, understanding how this impacts sustainability programs within convention centers becomes even more relevant. As the size of convention centers greatly affects employee work, future research could study ways in which centers around the country manage transportation and staffing in larger centers. Studies could also focus on the impacts that employees have continuing their sustainable practices outside of the "office." The findings of the study will allow researchers and convention center managers to better grasp the impacts that employees have on sustainability programs and employee perceptions of development, implementation and of convention center sustainability programs.

Conclusion

This novel study utilized a multiple instrumental case study design to help understand planning, implementation, challenges, and employee impacts on U.S. convention center sustainability programs. The research utilized CAS theory to help understand the complexity of sustainability program development and implementation. In conclusion, convention center staff greatly affected the implementation of sustainability programs in the three U.S. convention centers. The discussion chapter repeatedly

discussed the need for CAS thinking when assessing convention center sustainability programs. The development and implementation phases of convention center sustainability programs are not distinctly different; they are simply two aspects of a spectrum following the life of a sustainability program. To successfully develop and implement sustainability programs, there were a number of different factors that also related to CAS. The chapter discussed how clear sustainability definitions helped centers train and educate employees and nonemployees. Education, training, and communication led to program buy-in, positive perceptions towards the sustainability programs and a sense of center ownership. Sustainability practices in convention centers were also systems. Environmental practices affect the social well-being of individuals at the center. Costs can be prohibitive to training and purchasing more environmentally friendly products. Institutional policies affect the ways in which employees conduct their jobs. By expanding definitions of sustainability beyond environmental practices and including economic, social, and institutional systems, organizations can gather a more holistic understanding of their efficiency and overall functionality. In addition, the expansion would allow convention centers to gain more credit for the work they are doing, as they are already including many social, economic, and institutional aspects of sustainability into their sustainability programs without acknowledging it.

There were a number of themes that arose from my field notes from this study. One finding from my field notes was that, while social sustainability may not be a key focus in the convention center sustainability programs, the centers do consider social sustainability. One field note entry said, “When I hear that people are working at the center for 20-30 years, I think, people are happy. Happy enough to make a career of

changing lightbulbs, recycling, and helping with the functionality of the center." In general, employees discussed how much they love working for the centers; they love the constant change, the required speed, and the reliability of work. The majority of the participants in the study had worked for the centers for at least 20 years.

I was especially inspired by the stories from the frontline employees who many times did thankless jobs such as collecting waste, cleaning bathrooms or changing lightbulbs, yet they truly felt that they were making an individual difference in the sustainability programs. In fact, one participant referred to the other staff members as "my employees" throughout the interviews. This confused me and I had to stop mid-interview to ask who their employees were. It was then that the participant clarified that "my employees" were all of the employees at the center. The person experienced ownership of the center, the people and the sustainability program.

There were a number of limitations to the study. One of the limitations was that the interviews did not include a lot of frontline employees, nor did it incorporate a lot of younger participants. The convention centers used for the study were extremely busy, continuously hosting events back to back. With limited time and resources, both the centers and I were limited by staff availability during the times that I was visiting the areas. Staff availability also affected the length of time available for the interviews. However, despite the limited sample, findings from both frontline employee and younger employees were beginning to look significant. Future research should seek to understand the ways in which participant age can affect implementation of sustainable practices. Frontline employees also had unique perspectives, but these views were not drawn out in the study, because I did not want to segregate the handful of employees who did

participate. Finally, the results of the interview question on structure of organizational sustainable practice implementation in a convention center began to show interesting results. Unfortunately, due to time constraints, I was unable to ask all of the respondents that question. However, future research should assess the organizational system of sustainable practice implementation within convention centers.

APPENDIX A

ASSESSMENT OF CERTIFICATIONS USED BY THE 40 LARGEST U.S. CONVENTION CENTERS

Table A.1 Certifications Used by the 40 Largest U.S. Convention Centers

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
1	McCormick Place (Chicago, IL)	2,600,000	APEX/ASTM, LEED (West building is the largest new construction facility to be certified in the United States)	http://www.mccormickplace.com/green-initiatives.php
2	Orange County Convention Center (Orlando, FL)	2,100,000	APEX/ASTM, ISO, LEED Gold for Existing Buildings: Operations and Maintenance	http://www.occc.net/community/green.asp
3	Las Vegas Convention Center (Las Vegas, NV)	1,940,631	None	http://www.lvcva.com/article/green-initiatives/811/
4	Georgia World Congress Center (Atlanta, GA)	1,400,000	LEED Silver for Existing Buildings: Operations and Maintenance (2009) (World's largest LEED certified convention center)	http://www.gwcc.com/about/See_Green.aspx

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
5	Sands Expo & Convention Center/ Venetian | The Palazzo Resort Hotel Casino (Las, Vegas, NV)	1,305,052	2nd Level APEX/ASTM, Global Reporting Initiative (GRI), LEED Gold for Existing Buildings (Sands Expo and Venetian), LEED Silver for new construction (the Palazzo), TripAdvisor GreenLeader Gold Certification (The Venetian and the Palazzo)	http://www.sands.com/sands-eco-360/our-vision.html
6	Kentucky Exposition Center (Louisville, KY)	1,100,000	None	http://www.kyconvention.org/images/KSFB-2013AnnualReport-web.pdf
7	New Orleans Ernest N. Morial Convention Center (New Orleans, LA)	1,100,000	None	http://www.mccno.com/about-us/green-efforts/
8	NRG Park (Previously Reliant Park) (Houston, TX)	1,056,213	None	https://www.reliant.com/en/residential/appendix-navigation/inside-reliant/nrg-park/nrg-park.jsp

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
9	International Exposition Center (I-X Center) (Cleveland, OH)	1,050,000	None	None
10	Kay Bailey Hutchinson Convention Center, formerly Dallas Convention Center (Dallas, TX)	1,018,942	LEED Silver, ISO 14001	http://www.dallasconventioncenter.com/planners/green-building-green-meetings/
11	Mandalay Bay Resort & Casino (Las Vegas, NV)	934,731	Green Key Eco-Rating Program (5 Keys)	http://www.mandalaybay.com/conventions/environment/#
12	George R. Brown Convention Center (Houston, TX)	893,590	None	http://www.houstonconventionctr.com/HomePage/PressRoom/PressReleases/tabid/93/id/40/Default.aspx
13	Jacob K. Javits Convention Center (New York City, NY)	840,000	None	http://www.javitscenter.com/Default.aspx?cmsid=150

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
14	Donald E. Stephens Convention Center (Rosemont, IL)	840,000	None	None
15	Anaheim Convention Center (Anaheim, CA)	813,000	LEED Existing Buildings: Operations and Maintenance (2009), working on next level now	http://meetings.anaheimoc.org/anaheim-convention-center/green-policies and http://www.usgbc.org/projects/anaheim-convention-center-0?view=overview
16	Indiana Convention Center & Lucas Oil Stadium (Indianapolis, IN)	749,100	Plans for LEED with next expansion	http://www.icclos.com/pdf/ICCLOS_GreenInitiatives1_8.5x11.pdf
17	Cobo Center (Detroit, MI)	722,500	Green Venues Michigan Certification, Level 1 APEX/ASTM	http://www.cobocenter.com/green_initiatives_1
18	Los Angeles Convention Center (Los Angeles, CA)	720,000	LEED Gold Existing Buildings: Operations and Maintenance (2008)	http://www.lacclink.com/about/green-initiatives

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
19	Walter E. Washington Convention Center (Washington, DC)	703,000	None	http://www.dcconvention.com/AboutUs/StayGreen/Convention-Center-green-brochure-web.aspx
20	Pennsylvania Convention Center (Philadelphia, PA)	679,000	None	http://www.paconvention.com/the-center/Pages/green.aspx
21	Phoenix Convention Center (Phoenix, AZ)	645,000	LEED Silver (West Building) (North building incorporates LEED standards but is not certified), IACC Green Star Sustainability Certified	https://www.phoenixconventioncenter.com/pdf/Sustainability%20Green%20Brochure%202015.pdf
22	San Diego Convention Center (San Diego, CA)	615,701	Currently LEED Silver Existing Building: Operations and Maintenance (2011), Phase III of the next expansion will include a LEED Gold certified area	http://visitsandiego.com/sites/default/files/basic/SDCCC_GreenMeetings_2015_0.pdf and http://visitsandiego.com/2014/04/rooftop-park-will-energize-san-diegos-waterfront

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
23	Colorado Convention Center (Denver, Co)	584,000	LEED Gold Existing Buildings: Operations and Maintenance (2014), Level 2 APEX/ASTM, ISO 14001 (Environmental Management System)(2009)	http://denverconvention.com/about-us/sustainability/certifications/
24	Boston Convention & Exhibition Center (Boston, MA)	516,000	None	http://massconvention.com/community/green-environment
25	Calvin L. Rampton Salt Palace Convention Center (Salt Lake City, UT)	515,000	LEED Silver (2006)	http://www.visitsaltlake.com/salt-palace-convention-center/about-meetings/sustainability/
26	Pennsylvania Farm Show Complex & Expo Center (Harrisburg, PA)	506,000	None	http://www.pafarmshowcomplex.com/GoingGreen.aspx
27	America's Center (St. Louis, MO)	502,000	None	none
28	The Atlanta Convention Center at AmericasMart (Atlanta, GA)	502,000	None	none

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
29	Miami Beach Convention Center (Miami, FL)	502,000	None	http://inhabitat.com/big-unveils-massive-green-overhaul-of-miami-beach-convention-center/
30	Atlantic City Convention Center (Atlantic City, NJ)	500,000	None	http://www.atlanticcitynj.com/meeting-planners/ac-convention-center/green-initiative/ and http://www.atlanticcitynj.com/!userfiles/pdfs/2013-GreenInitiativeACCC.pdf
31	Minneapolis Convention Center (Minneapolis, MN)	475,000	Level 1 APEX/ASTM	http://www.minneapolis.org/minneapolis-convention-center/event-planners/eco-focused

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
32	Moscone Center (San Francisco, CA)	442,000	LEED Gold for Existing Buildings: Operations and Maintenance	https://www.moscone.com/community/sustain.html
33	Henry B. Gonzalez Convention Center (San Antonio, TX)	440,000	Future plans for LEED, none currently	http://www.sahbgcc.com/default.asp?sanantonio=31 and http://www.sanantonio.gov/portals/0/files/csef/SustainabilityProgram-2015.pdf
34	Greater Columbus Convention Center (Columbus, OH)	410,000	Getting LEED certified now	https://www.columbusconventions.com/pressrelease.php?pr=290 and https://www.columbusconventions.com/goinggreen.php
35	Expo Square (Tulsa, OK)	400,000	None	none
36	Kansas City Convention Center & Entertainment Facilities (Kansas City, MO)	388,800	LEED Silver (Grand Ballroom)	http://kcconvention.com/about/sustainability/

Table A.1 continued

Rank by ft^2	Convention Center and Link to Website	Square Footage	Certifications	Link
37	Reno-Sparks Convention Center (Reno, NV)	381,000	None	http://www.visitrenotahoe.com/meetings-conventions/facilities/reno-sparks-convention-center/sustainability-efforts
38	Atlanta Exposition Center (Atlanta, GA)	366,000	None	none
39	Music City Center (Nashville, TN)	350,000	LEED Gold for New Construction, TN Green Star Partnership & Mayor's Workplace Challenge: Green (Gold) & Healthy (Silver) 2015	http://www.nashvillemusiccitycenter.com/leed/sustainability and http://www.nashvillemusiccitycenter.com/leed
40	World Market Center Las Vegas (Las Vegas, NV)	350,000	None	none

APPENDIX B

SUSTAINABILITY CERTIFICATIONS UTILIZED BY U.S. CONVENTION CENTERS

Table B.1 Information About Sustainability Certifications Utilized by U.S. Convention Centers

Certification	Levels	Description	Link
Leadership in Energy & Environmental Design (LEED)	Building Design and Construction (BD+C)	Applies to buildings that are being newly constructed or going through a major renovation: New Construction*;* Core and Shell*;* Schools*;* Retail*;* Healthcare*;* Data Centers*;* Hospitality*;* Warehouses and Distribution Centers	http://www.usgbc.org/certification
	Interior Design and Construction (ID+C)	Applies to projects that are a complete interior fit-out: Commercial Interiors; Retail; Hospitality	
	Building Operations and Maintenance (O+M)	Applies to existing buildings that are undergoing improvement work or little to no construction: *Existing Buildings; Data Centers; Warehouses and Distribution Centers; Hospitality; Schools; Retail*	
	Neighborhood Development (ND)	Applies to new land development projects or redevelopment projects containing residential uses, nonresidential uses, or a mix. Projects can be at any stage of the development process, from conceptual planning to construction: Plan; Project	
	Homes	Applies to single family homes, low-rise multifamily (one to three stories), or mid-rise multifamily (four to six stories): Homes and Multifamily Low-rise*;* Multifamily Midrise	

Table B.1 continued

Certification	Levels	Description	Link
Convention Industry Council's Accepted Practices Exchange and the American Society for Testing and Materials (APEX/ASTM Standards)	Accommodations Audio Visual Communication and Marketing Destinations Exhibits Food and Beverage Onsite Office Transportation Venues	The standards range from Level 1 to Level 4 with Level 4 being the most difficult to achieve. Inside of each of the nine standards (sometimes called "sector standards") eight impact areas are targeted: 1. Staff Management and Environmental Policy; 2. Communications; 3. Waste; 4. Energy; 5. Air Quality; 6. Water; 7. Procurement; 8. Community Partners	http://www.gmicglobal.org/?page=APEX
International Organization for Standardization ISO 14001: Environmental Management System		ISO 14001:2015 is intended for use by an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability. ISO 14001:2015 is applicable to any organization, regardless of size, type, and nature, and applies to the environmental aspects of its activities, products and services that the organization determines it can either control or influence considering a life cycle perspective. ISO 14001:2015 does not state specific environmental performance criteria. ISO 14001:2015 can be used in whole or in part to systematically improve environmental management. Claims of conformity to ISO 14001:2015, however, are not acceptable unless all its requirements are incorporated into an organization's environmental management system and fulfilled without exclusion.	http://www.iso.org/iso/home/store/catalogue_ics/catalogue_detail_ics.htm?csnumber=60857

Table B.1 continued

Certification	Levels	Description	Link
Global Reporting Initiative (GRI)	None	GRI'S Sustainability Reporting Standards GRI's Standards help businesses, governments and other organizations understand and communicate the impact of business on critical sustainability issues. Some of the distinctive elements of the GRI Standards– and the activity that creates them – include: Multistakeholder input: Our approach is based on multistakeholder engagement. We By bringing all address the needs of all report makers and users, enabling us to produce universally-applicable reporting guidance that meets the needs of all report makers and users. All elements of the Reporting Framework are created and improved using a consensus-seeking approach, and considering the widest possible range of stakeholder interests which includes business, civil society, labor, accounting, investors, academics, governments, and sustainability reporting practitioners. A record of use and endorsement: Of the world's largest 250 corporations, 93% report on their sustainability performance and 82% of these use GRI's Standards to do so. With over 18,000 GRI Reports recorded in our database, sustainability reporting using the GRI Standards continues to grow. New audiences for sustainability information, like investors and regulators, are now calling for more and better performance data. Annual growth in the number of reporters is expected to continue, as we work towards a key area of our strategy: more reporters and better reporting. Governmental references and activities: Enabling policy is a key aspect of our overall strategy and we work with governments, international organizations, and capital markets to further this agenda. As a result of our work, 27 countries use GRI in their sustainability policies and look to us for guidance as the world's most widely used sustainability reporting standards. In addition we have long-standing collaborations with over 20 international organizations such as the UNGC, OECD, and the UN Working Group on Business & Human Rights. Independence: The creation of the Global Sustainability Standards Board in 2014, and related governance structure changes, have strengthened the independence of the standards aspect of our work. Our funding approach also ensures our independence. GRI is a *stichting* – in Dutch, a nonprofit foundation – with a business model that aims for a degree of self-sufficiency. Funding is secured from diverse sources; governments, companies, foundations, partner organizations and supporters. Shared development costs: The expense of developing GRI's reporting guidance is shared among many users and contributors. For companies and organizations, this negates the cost of developing in-house or sector-based reporting frameworks.	https://www.globalreporting.org/information/sustainability-reporting/Pages/gri-standards.aspx

Table B.1 continued

Certification	Levels	Description	Link
TripAdvisor GreenLeaders Gold Certification	GreenPartner: meets minimum requirements GreenLeader Bronze: meets minimum requirements and achieves a 30% score on the Green Practices survey GreenLeader Silver: meets minimum requirements + 40% survey score GreenLeader Gold: meets minimum requirements + 50% score GreenLeader Platinum: meets minimum requirements + 60% score or higher	The TripAdvisor GreenLeaders Program showcases a variety of eco-friendly hotels and B&Bs, from budget to luxury – and they're all committed to green practices like recycling, local, and organic food, and electric car charging stations. There are five tiers of the GreenLeaders program. All participating hotels and B&Bs must meet a minimum set of requirements to be included in the program and attain the level of GreenPartner: Having linen and towel re-use plans Tracking energy usage on a regular basis Recycling Using energy efficient light-bulbs Educating staff and guests on green practices Properly treat waste water (either using an on-site or municipal sewage system) Properties that qualify at the GreenPartner level will have their status shown in their amenities page. To qualify as a GreenLeader, businesses must also achieve a minimum score on the application survey. GreenLeader properties are eligible for one of the four badge levels: bronze, silver, gold, and platinum. Badge levels are determined by a property's overall level of participation in environmentally friendly activities.	https://www.tripadvisorsupport.com/hc/en-us/articles/200614097-What-are-the-levels-of-the-GreenLeaders-Program- and http://www.tripadvisor.com/GreenLeaders

Table B.1 continued

Certification	Levels	Description	Link
Green Key Eco-Rating Program		The Green Key Eco-Rating Program is a graduated rating system designed to recognize hotels, motels, and resorts that are committed to improving their environmental and fiscal performance. Based on the results of a comprehensive environmental self-assessment, lodging facilities are awarded a rating from 1 to 5 Keys, 5 Keys being the highest attainable. In support of their efforts towards becoming a cutting-edge green lodging property, members are provided with guidance on how to "unlock" opportunities for reductions in utility consumption, waste, emissions, and operating costs. Additional recommendations are also outlined for employee training, staff and customer engagement, supply chain management, community involvement and more. The Assessment The Green Key Program assesses the five main operational areas of a property and covers nine areas of sustainable practices: Operational Areas; Corporate Environmental Management; Housekeeping; Food & Beverage Operations; Conference & Meeting Facilities; Engineering; Sustainable Practices; Energy conservation; Water conservation Solid waste management; Hazardous waste management Indoor air quality; Community outreach Building infrastructure; Land use Environmental management	http://greenkeyglobal.com/programs/
Green Venues Michigan Certification		Michigan's green venue certification program is for entertainment venues, convention centers, and similar facilities. The program is from the Michigan Department of Energy, Labor, & Economic Growth's Bureau of Energy Systems. The Green Venues Michigan Certification is modeled after the department's Green Lodging Michigan program.	http://www.mlive.com/news/index.ssf/2009/12/michigan_launches_new_green_ce.html
IACC Green Star Sustainability Certified	Silver Tier: 75% of the Code of Sustainability	The International Association of Conference Centres has a rigorous Code of Sustainability which includes 60 tenets in the following areas: Education, Awareness and Public Declaration, Waste Management, Recycling, Reuse, Water Conservation, Purchasing, Energy Management, Air Quality, Food & Beverage IACC monitors and updates the Code periodically in order to ensure that it reflects state-of-the-art best practices. When IACC members sign the Code of Sustainability, they certify that their organization supports IACC's Environmental Policy and they join with other members in striving for more sustainable, environmentally responsible industry policies and practices. Members are required to update the status of their adherence to applicable tenets in the Code on an annual basis and IACC recognizes three tiers of participation.	http://www.iacconline.org/environmental-initiatives

APPENDIX C

INTERVIEW SCRIPT: MANAGERS

Part 1- Introduction and Orientation

- Researcher to introduce herself
    - Student, University of Utah, Salt Lake City, UT
- Research's aim
    - Contribute to the improvement of sustainability programs for convention centers
- Interview's objectives
    - Understand the development, implementation, and challenges to sustainability programs at the University of Utah.
    - Understand the participant's perceptions of the sustainability program at the convention center
- Interview process
    - You have been chosen because of your involvement in the convention center's sustainability program.
    - Series of interview questions
    - Allowed to talk freely and ask questions
    - This interview will be audio recorded, purpose of audio recording

- Confidentiality is extremely important. The interviewees name will not be included in any write-ups or presentations of the research
- Strictly for research purposes

Part II- Interview Questions

- Background information
  - Code Name:
  - Position:
    - What exactly do you do?
  - Department:
  - Time in this position:
  - How strong would you describe your involvement in sustainability program at the convention center?

R1. Do you know the origins of the sustainability program? If so, please describe.

Formation of Sustainability Program

- Who was involved in the creation of the sustainability program?

- Over what timeframe was the sustainability program developed?

- Tell me about the sustainability program at the convention center.

- How many employees work at the convention center? Your department?

- Who are the key stakeholders of the sustainability program today?

- Why did the convention center bring on a sustainability manager (if one exists)?

Certifications

- Tell me about the sustainability certification/s?

- How does the certification program fit into the overall sustainability program/ plan?

- Who is in charge of insuring that the certification programs are implemented? (measuring/ reporting)

- In your opinion, are you achieving what your guidelines/ policies have set out to do?

Organizational Foundation

- This is a typical model of a CC (see picture [Figure C.1]), how would you draw the relationship between sustainability and the convention center?

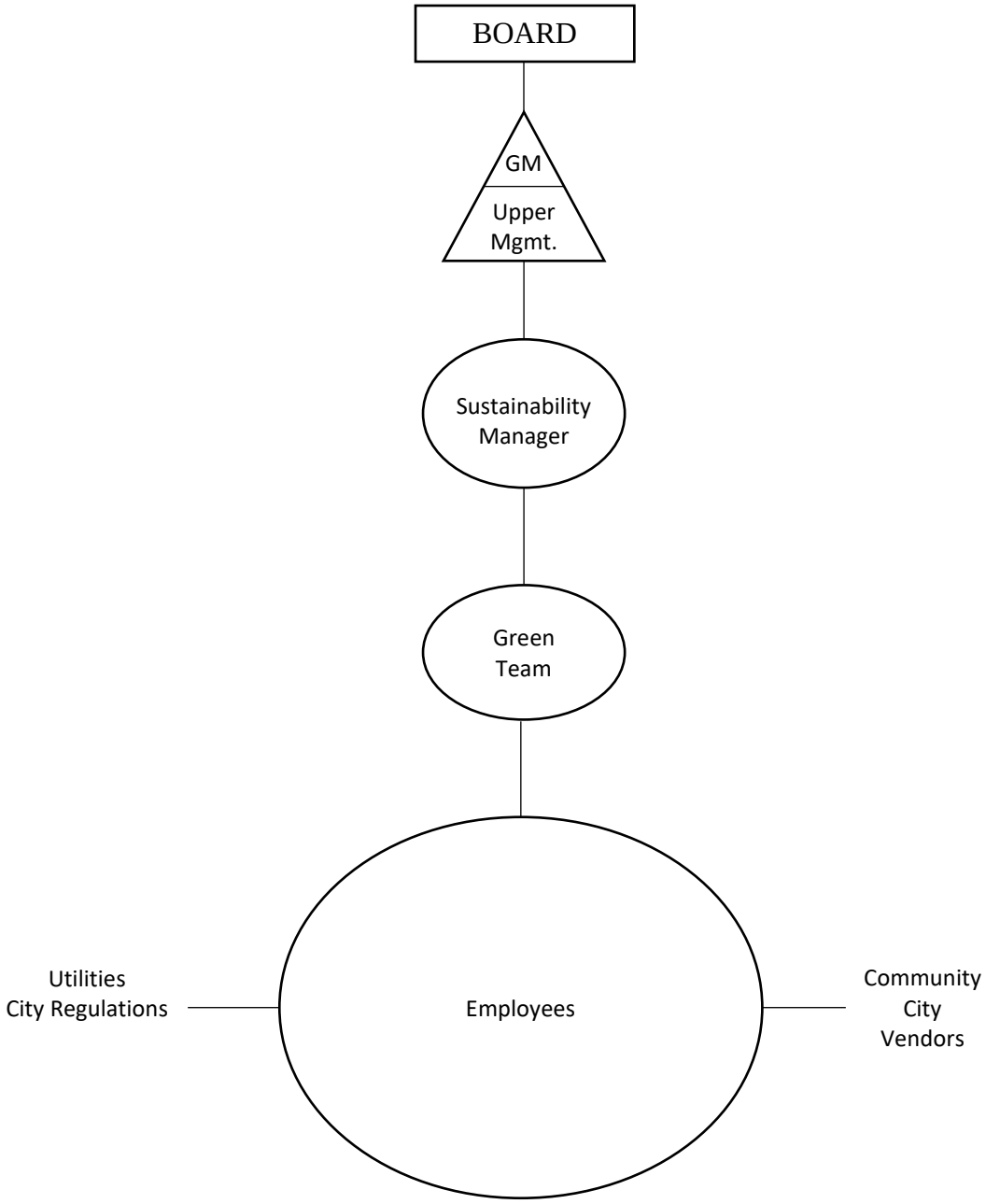


Figure C.1. Structure of organizational sustainable practice implementation in a convention center.

R2. How is sustainability implemented at the convention center?

Education and Training

- How are employees trained on the sustainability program?

- What is a training? Classroom? Hands on?

- How often are the trainings? Are there brush-up courses?

Communication

- How are sustainability and the sustainability program communicated internally?

- How are sustainability and the sustainability program marketed externally?

R3. What is the role of the employee in the implementation of the sustainability program?

Employees

- How do the employees of the convention center view the sustainability program?

- What does the convention center do to hold employees accountable for the implementation of the sustainability program?

- What does the convention center do to reward employees for their involvement in the sustainability program?

- What other factors can influence implementation of the sustainability program by employees?

R3. Success

- What are the greatest successes of the sustainability program?

R4. Challenges

- What are the greatest challenges of the sustainability program?

- Does the size of the center impact the sustainability program?

- Is there a financial cost to the sustainability program?

- Do unions and contract workers affect the success of the sustainability program?

R5. Sustainability

- How do you define sustainability?
- How do you apply (and to what extent) your understanding of sustainability to your everyday life?

- Did you participate in sustainable practices prior to your involvement in the convention center sustainability program?

- Are there policies are practices that you don't like doing? Like what?

- Are there tasks that are more difficult or more easy?
    - More onerous, very little payback. Is it worth it?

Part III- Recommendations of connections

- Snow-ball, recommend potential participants
    - Are there any individuals who you think may have a role in creating or implementing sustainability the sustainability that I need to talk to?

APPENDIX D

INTERVIEW SCRIPT: EMPLOYEES

Part 1- Introduction and Orientation

- Researcher to introduce herself
    - Student, University of Utah, Salt Lake City, UT
- Research's aim
    - Contribute to the improvement of sustainability programs for convention centers
- Interview's objectives
    - Understand the development, implementation, and challenges to sustainability programs at the University of Utah.
    - Understand the participant's perceptions of the sustainability program at the convention center
- Interview process
    - You have been chosen because of your involvement in the convention center's sustainability program.
    - Series of interview questions
    - Allowed to talk freely and ask questions
    - This interview will be audio recorded, purpose of audio recording

- Confidentiality is extremely important. The interviewees name will not be included in any write-ups or presentations of the research
- Strictly for research purposes

Part II- Interview Questions

- Background information
  - Code Name:
  - Position:
    - What exactly do you do?
  - Department:
  - Time in this position:
  - How strong would you describe your involvement in sustainability program at the convention center?

R1. Sustainability program at the convention center

- Tell me about the sustainability program at the convention center.
- What are the key issues addressed in the sustainability policy of the Center?
- Who are the key people involved in the sustainability program today?
  - Employees, partnering organizations outside of the convention center

Certifications

- Tell me about the sustainability certification/s?

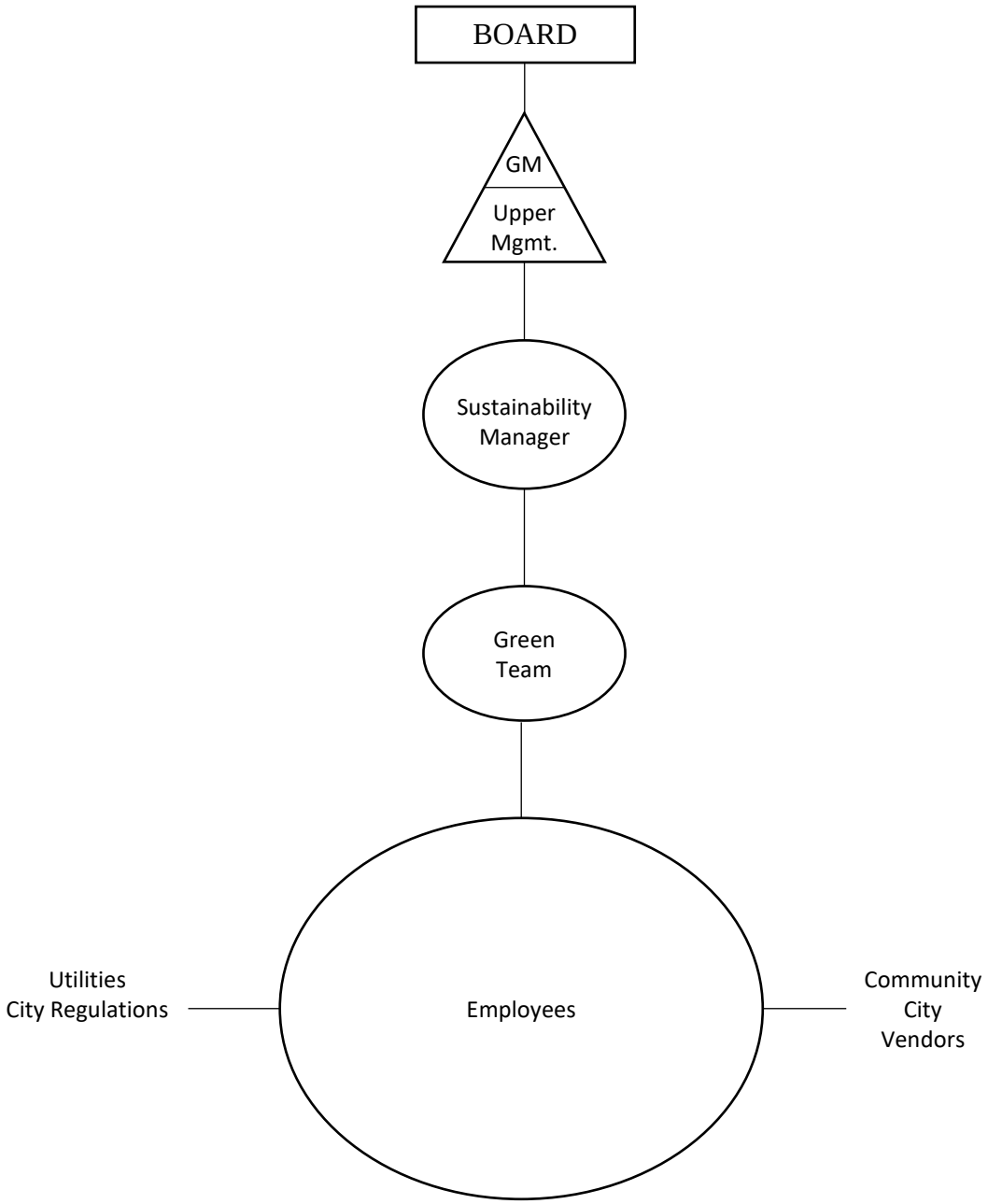
- How does the certification program fit into the overall sustainability program?

- Who is in charge of insuring that the certification programs are implemented? (measuring/ reporting)

- In your opinion, are you achieving what your guidelines/ policies have set out to do?

Organizational Foundation

- This is a typical model of a CC (see picture), how would you draw the relationship between sustainability and the convention center?



R2. How is sustainability implemented at the convention center?

Education and Training

- How are employees trained on the sustainability program?

- What is a training? Classroom? Hands on?

- How often are the trainings?

Communication

- How is sustainability and the sustainable practice communicated internally?

- How is sustainability and sustainable practice marketed externally?

R3. What is the role of the employee in the implementation of the sustainability program?

Employees

- How do the employees of the convention center view the sustainability policies and practices?

- What does the convention center do to hold employees accountable for the implementation of the sustainability program?
- What does the convention center do to reward employees for their involvement in

the sustainability program?

- What other factors can influence implementation of the sustainability program by employees?

R3. What are the greatest successes of the sustainability program?

R5. Sustainability

- How do you define sustainability?

- How do you apply (and to what extent) your understanding of sustainability to your everyday life?

- Did you participate in sustainable practices prior to your involvement in the convention center sustainability program?

R4. Challenges

- What are the challenges to the sustainability program?

- Are there policies are practices that you don't like doing? Like what?

- Do you feel like the size of the center impacts your work?
- Do you like your job?

- Are there policies you don't understand, or you think are pointless?

- Is sustainability included in your job description?
    - Do you feel like you are making a difference?

- Are there tasks that are more difficult or more easy?
    - More onerous, very little payback. Is it worth it?

Part III- Recommendations of connections

- Snow-ball, recommend potential participants
    - Who do I HAVE to talk to about the sustainability program?

REFERENCES

Anaf, S., Drummond, C., & Sheppard, L. A. (2007, December). Combining case study research and systems theory as a heuristic model. *Qualitative Health Research, 17*(10), 1309-1315.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 544-559.

Bendell, J., & Kearins, K. (2005). The political bottom line: The emerging dimension to corporate responsibility for sustainable development. *Business Strategy and the Environment, 14*, 372-383. doi: 10.1002/bse.439

Boo, S., & Park, E. (2013). An examination of green intention: The effect of environmental knowledge and educational experiences on meeting planners' implementation of green meeting practices. *Journal of Sustainable Tourism, 21*(8), 1129-1147.

Bowen, F. (2014). *After greenwashing: Symbolic corporate environmentalism and society.* Cambridge, UK: Cambridge University

Brammer, S., Millionton, A., & Rayton, B. (2007). The contribution of corporate social responsibility to organizational commitment. *The International Journal of Human Resource Management, 18*(10), 1701-1719.

Bricker, K., Black, R., & Cottrell, S. (2012). *Sustainable tourism & the millennium development goals*. Boston: Jones & Bartlett Learning.

Brown, D., Dillard, J., & Marshall, S. (2009). Triple bottom line: A business metaphor for a social construct. In J. Dillard, V. Dujon, & M. King (Eds.), *Understanding the social dimension of sustainability* (pp. 211–229). New York: Routledge. Retrieved from http://www.sba.pdx.edu/faculty/darrellb/dbaccess/MIM/TBL.pdf

Chernan, J., & Jacob, J. (2012). A study of green HR practices and its effective implementation in the organization: A review. *International Journal of Business and Management, 7*(21), 25-33.

Collier, J., & Esteban, R. (2007). Corporate social responsibility and employee commitment. *Business Ethics: A European Review, 16*(1), 19-33.

Convention Industry Council. (2010). *APEX: Accepted practices exchange.* Retrieved from http://www.conventionindustry.org/StandardsPractices/APEX.aspx

Convention Industry Council. (2016). *Executive summary: Sustainable meeting and event practices: The state of the industry.* Retrieved from https://goo.gl/fEAsWt

Cottrell, S. P., Vaske, J. J., & Roemer, J. M. (2013). Resident satisfaction with sustainable tourism: The case of Frankenwald Nature Park, Germany. *Tourism Management Perspectives, 8*, 42-48.

Crabtree, B. F., & Miller, W. L. (Eds.). (1992). *Doing qualitative research: Multiple strategies.* Newbury Park, CA: Sage.

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Davison, R., & Rogers, T. (2006). *Marketing destinations and venues for conferences, conventions and business events.* Burlington, MA: Butterworth-Heinemann.

Deale, C. S. (2013, January). Sustainability education: Focusing on hospitality, tourism, and travel. *Journal of Sustainability Education*, *4*. Retrieved from http://www.jsedimensions.org/wordpress/wp-content/uploads/2013/01/CynthiaDeale2Winter2013.pdf

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The SAGE handbook of qualitative research*. Thousand Oaks, CA: Sage.

Draper, J., Dawson, M., & Casey, E. (2011). An exploratory study of the importance of sustainable practices in the meeting and convention site selection process. *Journal of Convention & Event Tourism, 12*, 153-178.

Emmel, N. (2013). *Sampling and choosing cases in qualitative research: A realist approach.* Thousand Oaks, CA: Sage.

Gay, K. (2000). *Work motivation factors of the public sector and private sector convention center employees.* (Unpublished master's thesis), University of Wisconsin-Stout.

Green Meeting Industry Council (n.d.). *APEX/ASTM sustainable event standard overview.* Retrieved from http://www.gmicglobal.org/?page=APEX

Greene, J. C. (2000). Understanding social programs through evaluation. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 981-999). Thousand Oaks, CA: Sage.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: An experiment with data saturation and variability. *Field Methods, 18*(1), 59-82.

Gunn, C. A. (1972). *Vacationscape: Designing tourist regions.* Austin: Bureau of Business Research, University of Texas.

Grunow, D. (1995). The research design in organization studies. *Organization Science, 6*(1), 93-103.

Haines, S. G. (2000). *The systems thinking approach to strategic planning and management.* Boca Raton, FL: CRC.

Hunt, B. (2011). Publishing qualitative research in counseling journals. *Journal of Counseling & Development, 89*, 296-300. doi:10.1002/j.1556-6678.2011.tb00092.x

Hunt, M. M. (2011). *Addressing climate change: Conventional resorts tackle the need to 'go green'* (Unpublished master's thesis). San Francisco University, San Francisco, CA.

Hunt, M. M. (2016). *Planning, implementation, and challenges of U.S. convention center sustainability programs: An exploratory multiple case study.* Unpublished manuscript, Department of Parks, Recreation, and Tourism, University of Utah, Salt Lake City, UT.

Jabareen, Y. (2009). Building a conceptual framework: Philosophy, definitions, and procedure. *International Journal of Qualitative Methods, 8*(4), 49-62.

Jere Lazanski, T., & Kljajić, M. (2006). Systems approach to complex systems modelling with special regards to tourism. *Kybernetes, 35*(7/8), 1048-1068.

Kim, S., & Choi, Y. (2013). Hotel employees' perception of green practices. *International Journal of Hospitality & Tourism Administration, 14*(2), 157-178.

Kock, G., Breitera, D., Hara, T., & DiPietro, R. B. (2008). Proposing a regional impact based feasibility studies framework for convention centers: A quantitative analysis of the Orange County Convention Center (OCCC). *Journal of Convention & Event Tourism, 9*(4), 309-340.

Lee, J., Breiter, D., & Choi, Y. (2011, January). *Quality of a green destination as perceived by convention attendees: The relationship between greening and competitiveness.* Boston, MA. Retrieved from http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1321&context=gradconf_hospitality

Lu, A. C. C., & Gursoy, D. (2013). Impact of job burnout on satisfaction and turnover intention: Do generational differences matter? *Journal of Hospitality & Tourism Research, 40*(2), 210-235.

McLellan, E., MacQueen, K. M., & Niedig, J. (2003). Beyond the qualitative interview: Data preparation and transcription. *Field Methods, 15*(1): 63–84.

Mackenzie, M., & Peters, M. (2010). Leadership and corporate social responsibility in the hotel industry in Hong Kong (Working paper abstract). In M. Orams, M. Lück, J.

Poulston, & S. Race (Eds.), *Proceedings of the New Zealand Tourism and Hospitality Research Conference.* Auckland, New Zealand: AUT University.

MacQueen, K. M., & Guest, G. (2008). An introduction to team-based qualitative research. In G. Guest & K. M. MacQueen (Eds.), *Handbook for team-based qualitative research* (pp. 3-19). Lanham, MD: AltaMira.

MacQueen, K. M., McLellan-Lemal, E., Bartholow, K., & Milstein, B. (2008). Team-based codebook development: Structure, process, and agreement. In G. Guest & K. M. MacQueen (Eds.), *Handbook for team-based qualitative research* (pp. 119-135). Lanham, MD: AltaMira.

Makower, J. (1994). *Beyond the bottom line: Putting social responsibility to work for your business and the world.* New York, NY: Simon & Schuster.

Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (5th ed.). Thousand Oaks, CA: Sage.

McCabe, V. S. (2012). Developing and sustaining a quality workforce: Lessons from the convention and exhibition industry. *Journal of Convention & Event Tourism, 13*(2), 121-134.

McKeown, C. (2013, May 14). Interpreting the quadruple bottom line. *Future Considerations*. Retrieved from http://futureconsiderations.com/2013/05/quadruple-bottom-line/

Meadows, D. H. (2008). *Thinking in systems: A primer*. White River Junction, VT: Chelsea Green.

Miles, M., & Huberman, A. M. (1994). *Qualitative data analysis: A sourcebook of new methods.* Beverly Hills, CA: Sage.

Miller, G., & Twining-Ward, L. (2005) *Monitoring for a sustainable tourism transition: The challenge of developing and using indicators*. Oxon, UK: CAB International.

Mungai, M., & Irungu, R. (2013). An assessment of management commitment to application of green practices in 4-5 star hotels in Mombasa, Kenya. *Information and Knowledge Management, 3*(6), 40-47.

Norman, W., & MacDonald, C. (2004). Getting to the bottom of "Triple Bottom Line." *Business Ethics Quarterly, 14*(2), 243-262.

NVivo qualitative data analysis Software (Version 11 Pro) (2015). QSR International Pty Ltd.

Otara, A. (2011). Perception: A guide for managers and leaders. *Journal of Management and Strategy, 2*(3), 21-24.

Park, E., & Boo, S. (2010). An assessment of convention tourism's potential contribution to environmentally sustainable growth. *Journal of Sustainable Tourism, 18*(1), 95-113.

Park, S. Y., & Levy, S. (2014). Corporate social responsibility: Perspectives of hotel frontline employees. *International Journal of Contemporary Hospitality Management, 26*(3), 332-348.

Pfalzgraf, K. (2015, July 7). ASTM standards continue to gain traction. *IAVM: Facility Manager Magazine: Online & Print Quarterly.* Retrieved from http://magazine.iavm.org/article/astm-standards-continue-to-gain-traction/

Presbury, R., & Edwards, D. (2005). Incorporating sustainability in meetings and event management education. *International Journal of Event Management Research, 1*(1), 30-45.

PricewaterhouseCoopers LLP. (2014). *The economic significance of meetings to the U.S. economy: Interim study update for 2012: Executive summary.* Convention Industry Council. Retrieved from http://goo.gl/Inbp4Y

Rogers, T. (2013). *Conferences and conventions: A global industry* (3rd ed.). New York: Routledge.

Rupp, D. E., Ganapathi, J., Aguilera, R. V., & Williams, C. A. (2006). Employee reactions to corporate social responsibility: An organizational justice framework. *Journal of Organizational Behavior, 27*, 537-543.

Russell, M. (2008, March). *Convene*. Retrieved April 30, 2009, from Professional Meeting Planners Association: http://www.pcma.org/Convene/IssueArchives/March2008/Megatrends.htm

Ryan, J. R. D. (2007). *Employee buy-in: A manager's guide to achieving results through increased employee commitment*. Greensboro, NC: McIntire-Mills.

Simons, A., & Unterkofler, C. (2015). *Green venue report 2015: The state of convention & exhibition center sustainability*. Greenview and Twirl Management. Retrieved from http://www.greenvenuereport.com/2015-green-venue-report

Sox, C. B., Benjamin, S., Carpenter, J., & Strick, S. (2013). An exploratory study of meeting planners and conference attendees' perceptions of sustainable issues in convention centers. *Journal of Convention & Event Tourism, 14*, 144-161.

Springett, D. (2003). Business conceptions of sustainable development: A perspective from critical theory. *Business Strategy and the Environment, 12*, 71-86. doi 10.1002/bse.353

Sroufe, R., Liebowitz, J., & Sivasubramaniam, N. (2010). Are you a leader of a laggard? HR's role in creating a sustainability culture. *People and Strategy, 33*(1), 35-42

Stake, R. E. (1995). *The art of case study research.* Thousand Oaks, CA: SAGE.

Strick, S., & Fenich, G. G. (2013). Green certifications and ecolabels in the MEEC industry: Which are really worth it? *Journal of Convention & Event Tourism, 14*(2), 162-172.

Swarbrooke, J. (1999). *Sustainable tourism management* (pp. 351-352). Wallingford, UK: CAB International.

Teriman, S., Yigitcanlar, T., & Mayere, S. (2009, March 26). Sustainable urban development: A quadruple bottom line assessment framework. Proceedings *from The Second Infrastructure Theme Postgraduate Conference.* Brisbane, Australia: Queensland University of Technology.

Tinnish, S. M., & Mangal, S. M. (2012). Sustainable event marketing in the MICE industry: A theoretical framework. *Convention & Event Tourism, 13*(4), 227-249.

Tormohlen, D. (2014, August). Trade show executive's annual review of the mega convention centers and millionaire's club. *Trade Show Executive.* Retrieved from http://tradeshowexecutive.epubxp.com/i/357941-aug-2014

Torras, M., & Boyce, J. K. (1998). Income, inequality, and pollution: A reassessment of the environmental Kuznets Curve. *Ecological Economics, 25*, 147-160.

Toth, R. B. (2000). *Implementing a worldwide sustainable tourism certification system.* Working paper CEN 662, INCAE-CLACDS, June, 2000. Retrieved from http://conocimiento.incae.edu/ES/clacds/nuestras-investigaciones/pdf/cen662.pdf

Troy, K., & Conference Board. (1991). *Employee buy-in to total quality: A corporate progress report, no. 974.* New York: Conference Board.

Tufford, T., & Newman, P. (2012). Bracketing in qualitative research qualitative social work. *Qualitative Social Work, 11*, 80-96. doi:10.1177/1473325010368316

Turtle, C.R. (2008). Creating green meetings makes sustainability and business sense. *Hotel Business, 20*, 30.

Union of International Associations. (2014). *International Meetings Statistics Report* (55 ed.). Retrieved from http://www.uia.org/publications/meetings-stats

Unterkofler, C., & Simons, A. (2014). *Green venue report 2014: The state of convention center sustainability.* Greenview and Twirl Management. Retrieved from http://www.greenvenuereport.com/2014greenvenuereport/

Urry, J. (2005). The complexity turn. *Theory, Culture & Society, 22*(5), 1-14.

U.S. Green Building Council. (2015, February 15). *The business case for green building: Press kit.* Retrieved from http://www.usgbc.org/articles/business-case-green-

building

U.S. Travel Association. (2016a). *U.S. travel answer sheet: Facts about a leading American industry that's more than just fun.* Retrieved from https://www.ustravel.org/system/files/Media%20Root/Document/U.S._Travel_AnswerSheet_2015.pdf

U.S. Travel Association. (2016b). *U.S. travel and tourism overview (2015).* Retrieved from https://www.ustravel.org/system/files/Media%20Root/Document/Travel_Economic_Impact_Overview.pdf

Ustad, B., Liu, C., & Goodsir, W. (2010). Managers' perceptions on the implementation of environmental management systems in New Zealand hotels. In M. Orams, M. Lück, J. Poulston, & S. Race (Eds.), *Proceedings of the New Zealand Tourism and Hospitality Research Conference.* Auckland, New Zealand: AUT University.

Ventriglia, B., & Rios-Morales, R. (2013). The shift toward sustainability in the travel and trade industry. In I. Jenkins, & R. Schröder (Eds.), *Sustainability in tourism: A multidisciplinary approach.* Wiesbaden, Germany: Springer Gabler.

Walton, M. S. (2004). *Generating buy-in: Mastering the language of leadership*. New York: AMACOM.

WGBH Educational Foundation. (1996-2017). The modern environmental movement. *PBS.* Retrieved from http://www.pbs.org/wgbh/americanexperience/features/timeline/earthdays/1/

Wight, P. (2007). Ecotourism, CSR and the fourth dimension of sustainability. In J. E. S. Higham (Ed.), *Critical issues in ecotourism: Understanding a complex tourism phenomenon* (pp. 214-239). Burmingham, MA: Elsevier.

World Tourism Organization (2015). *UNWTO annual report 2014.* UNWTO, Madrid.

World Tourism Organization. (2016, July). *UNWTO tourism highlights, 2016 edition.* UNWTO, Madrid. Retrieved from http://www.e-unwto.org/doi/book/10.18111/9789284418145

World Travel & Tourism Council (2016). *Travel & tourism economic impact 2016: United States*. London. Retrieved from: https://goo.gl/Ce0ZG6

World Travel & Tourism Council (2016, March). *Travel & tourism economic impact 2016: World report.* London. Retrieved from https://goo.gl/KY8NdL

Wirtenberg, J., Harmon, J., Russell, W. G., & Fairfield, K. D. (2007) HR's role in building a sustainable enterprise: Insights from some of the world's best companies. *People and Strategy, 30*(1), 1-12.

Yin, R. K. (2011). *Qualitative research from start to finish*. New York: The Guilford Press.

Yin, R. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.

Yoo, J., & Weber, K. (2005). Progress in convention tourism research. *Journal of Hospitality & Tourism Research*, *29*(2), 194-222.